INSTRUCTION MANUAL Ver 1.01

ANTI-VANDAL 30x, 36x, 37x IP SPEED DOME CAMERA

CAUTION : TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT OPEN COVERS.
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONAL.

This lightning flash with arrowhead symbol is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT THE RISK OF FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE ELECTRONICS TO RAIN OR MOISTURE

Before installing and using the camera, please read these instructions thoroughly and retain them for later reference

Important Safeguard

1. **Read Instructions**

   Read all of the safety and operating instructions before using the product.

2. **Retain Instructions**

   Save these instructions for future reference.

3. **Attachments / Accessories**

   Do not use attachments or accessories unless recommended by the appliance manufacturer as they may cause hazards, damage product and void warranty.

4. **Water and Moisture**

   Do not use this product near water or moisture.

5. **Installation**

   Do not place or mount this product in or on an unstable or improperly supported location. Improperly installed product may fall, causing serious injury to a child or adult, and damage to the product. Use only with a mounting device recommended by the manufacturer, or sold with the product. To insure proper mounting, follow the manufacturer's instructions and use only mounting accessories recommended by manufacturer.

6. **Power source**

   This product should be operated only from the type of power source indicated on the marking label.

Precautions

❑ **Operating**

- Before using, make sure power supply and others are properly connected.
- While operating, if any abnormal condition or malfunction is observed, stop using the camera immediately and then contact your Special dealer.

❑ **Handling**

- Do not disassemble or tamper with parts inside the camera.
- Do not drop or subject the camera to shock and vibration as this can damage camera.
- Care must be taken when you clean the clear dome cover. Especially, scratch and dust will ruin your quality of camera.

❑ **Installation and Storage**

- Do not install the camera in areas of extreme temperature, which exceed the allowable range.
- Avoid installing in humid or dusty places.
- Avoid installing in places where radiation is present.
- Avoid installing in places where there are strong magnetic fields and electric signals.
- Avoid installing in places where the camera would be subject to strong vibrations.
- Never expose the camera to rain and water.

NOTE: If the camera is installed or rebooted after power failure when ambient temperature is below the freezing point, the dome cover is frosted. In this case, the frost will be disappeared after 3 hours after turning on the power. (It is noted that lowest guaranteed operating temperature is -45℃ (-49℉) without wind.)

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Features

❑ Camera Specifications

- CCD Sensor :

	CCD
PTI-M300	1/4" EX-view HADTM CCD
PTI-M301	1/4" Interline Transfer CCD
PTI-M302	1/4" Double Density Interline Transfer CCD

- Zoom Magnification :

	Optical Zoom	Digital Zoom	Total
PTI-M300	36	12	Max. 432
PTI-M301	30	10	Max. 300
PTI-M302	37	12	Max. 444

- WDR(Wide Dynamic Range) function support. (PTI-M300, PTI-M302 Only)
- DIS (Digital Image Stabilizer) function support. (PTI-M302 Only)
- Day & Night Function : ICR(IR Cut filter Removal)
- Various Focus Mode: Auto Focus / Manual Focus / Semi-Auto Focus.
- Independent or Global camera settings for each Preset locations.

❑ Powerful Pan/Tilt Functions

- Max. 360°/sec high speed Pan/Tilt Motion
- Using Vector Drive Technology, Pan/Tilt motions are accomplished in the shortest path. As a result, time to target view is reduced dramatically and the video on the monitor is very natural to watch.
- Ultra low speed (0.05°/sec) enables operator to locate camera to desired target view with accuracy and ease.
- Zoom-proportional pan/tilt speed helps operator to move the camera easily.

❑ Preset, Pattern, Scan, Group, Privacy Mask, Schedule and More…

- MAX. 127 Presets are assignable. All of them have independent characteristics such as White Balance, Auto Exposure, Label, Alarm Input/Output and so on.
- Max. 8 set of Scan can be stored. This enables to move camera repetitively between two preset positions with designated speed.
- Max. 4 of Patterns can be recorded and played back. This enables to move camera to follow any trajectory operated by joystick as closely as possible.
- Max. 8 set of Group action can be stored. This enables to move camera repetitively with combination of Preset or Pattern or Scan. A Group is composed of max. 20 entities of Preset/Pattern/Scans.
- Max 8 Privacy Masks can be set up to protect privacy of other people.
- 7 rules of Schedule can be assigned by day and time. Appropriate actions (such as Home, Preset, Group, Pattern and Scan) can be defined for each rule. Also, it is possible to use **Weekday** and **All days** to simplify the rule.

❑ **PTZ(Pan/Tilt/Zoom) Control**

- With RS-485 communication, max. 255 of cameras can be controlled at the same time.
- Pelco-D/ Pelco-P/ Samsung protocol can be selected as a control protocol in the current version of firmware.

❑ **OSD(On Screen Display) Menu**

- OSD menu is provided to display the status of camera and to configure the functions interactively.
- The information such as Camera ID, Pan/Tilt/Zoom/Direction, Alarm Input & Output, date/time, current temperature and Preset can be displayed on screen.
- Each display item can be turned on or off independently.

❑ **Alarm I/O Functions**

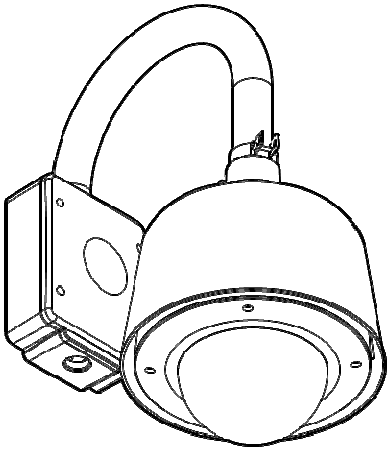
- 8 alarm sensor Inputs and 4 relay output are available.
- To reject external electric noise and shock perfectly, alarm sensor Input is decoupled with photo coupler.
- The signal range of sensor input is from DC 5.0 to 12.0 volts to adopt various applications.
- If an external sensor is activated, camera can be set to move to the corresponding Preset position.
- Relay outputs can be assigned to work with a certain preset.

❑ **Reserved Presets for Special Purpose**

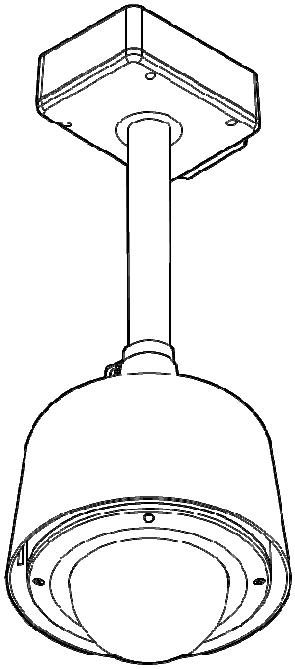
- Most of camera settings are directly changed by calling Reserved Presets, not entering into OSD menu. For more information, refer to "Reserved Presets" in page 18 of this manual.

Product & Accessories

❑ Product

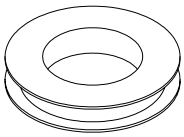
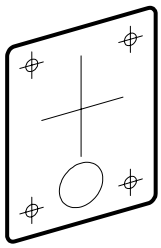
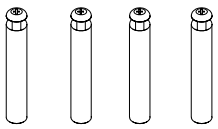
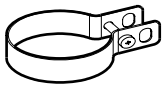
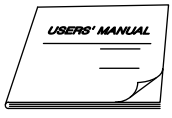
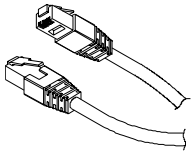


● Wall Mount Type

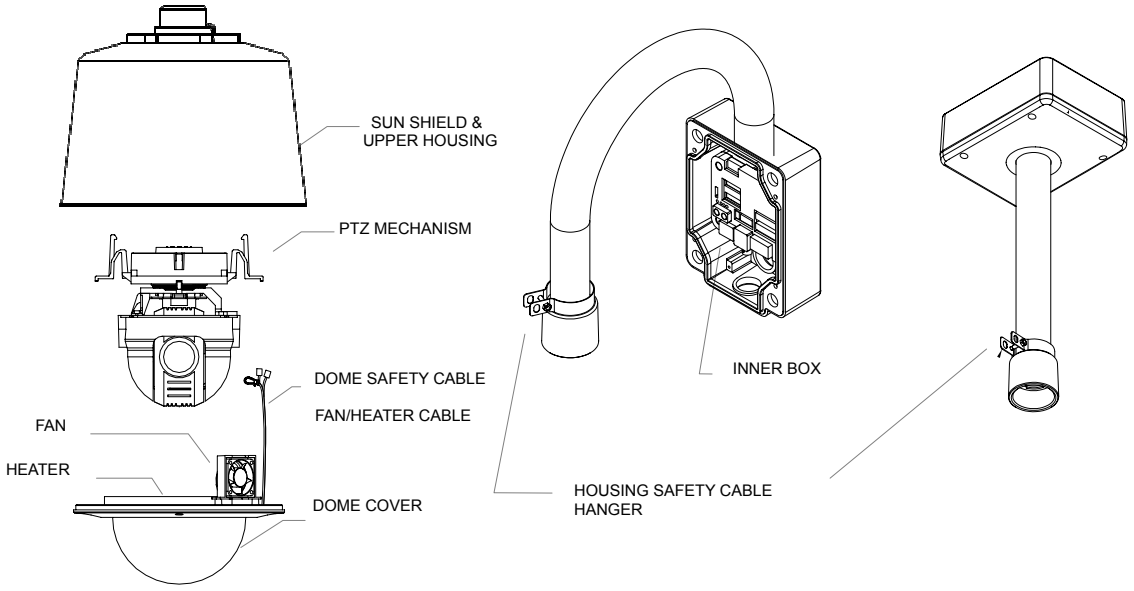


● Ceiling Mount Type

❑ Accessories

			
Hexagonal wrench	Water proof tape	Hole Template	Anchor bolts (4pcs)
			
Housing Safety Cable Hanger	Instruction Manual	Safety Cable	Crossover Cable

Parts Name & Functions



- Dome Cover

  Do not detach protection vinyl from dome cover before finishing all installation process to protect dome cover from scratches or dust.

  In the dome cover, there are Fan and Heater to remove moisture on the bubble dome.

- Sunshield & Upper housing

  Sunshield protect bubble dome cover from the sun rays and rain fall from. In the sunshield, there is the upper housing which will contain accommodate PTZ mechanism. Also, the upper housing will be connected to both mounting brackets and dome cover.

- Wall/Ceiling mount Bracket

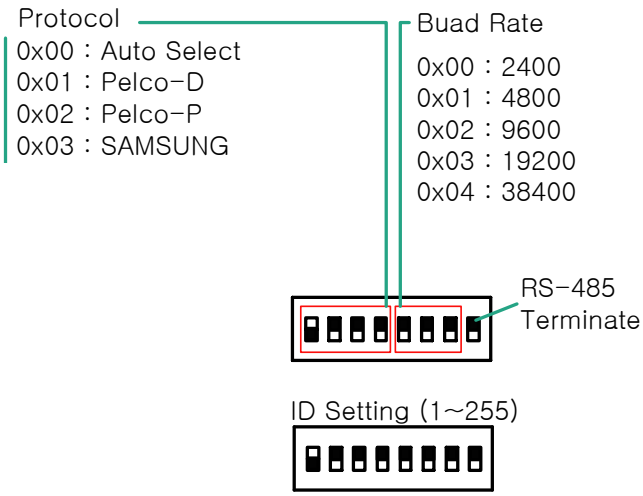
  These are used to install the camera on the wall or ceiling and have junction box. The junction box of the bracket accommodate inner box.

- Inner box

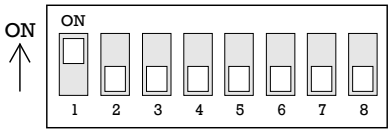
  The inner has many important roles of connection box between camera and outside. Top of the box, there are dip switches and terminal blocks for Power supply, Video, Communication, Alarm Input/output.

DIP Switch Setup

Before you install the camera, you should set the DIP switches to configure the camera ID, communication protocol.



❑ Camera ID Setup

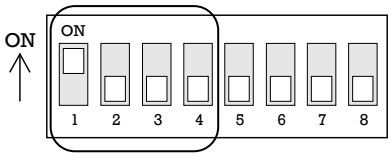


- ID number of camera is set using binary number. The example is shown bellow.

Pin	1	2	3	4	5	6	7	8
ID Value	1	2	4	8	16	32	64	128
ex) ID=5	on	off	on	off	off	off	off	off
ex) ID=10	off	on	off	on	off	off	off	off

- The range of ID is 0~255. Factory default of Camera ID is 1.
- If you want to control a certain camera, you must match the camera ID with Cam ID setting of DVR or Controller.

❑ Communication Protocol Setup

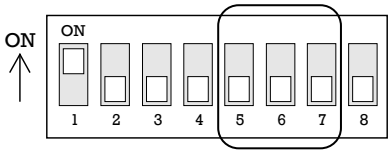


- Select the appropriate Protocol with DIP switch combination.

Switch State				Protocol
Pin1	Pin2	Pin3	Pin4	
OFF	**OFF**	**OFF**	**OFF**	**Auto Protocol**
ON	OFF	OFF	OFF	PELCO-D
OFF	ON	OFF	OFF	PELCO-P
ON	ON	OFF	OFF	SAMSUNG

- If you set the protocol as Auto Protocol, camera will automatically recognize the kind of Protocol.
- Auto Protocol supports Pelco-D and Samsung Protocol.
- If you want to control using DVR or system keyboard, their protocol must be identical to camera. Otherwise, you can not control the camera.
- If you changed camera protocol by changing DIP S/W, the change will be effective after you reboot the camera.
- Factory default of protocol is "Auto Protocol

❑ Communication Baud rate Setup

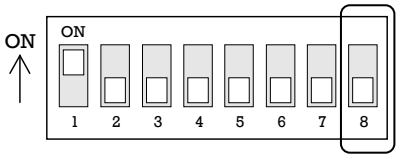


- Select the appropriate Baud rate with DIP switch combination.

Switch State			Protocol
Pin5	Pin6	Pin7	
OFF	OFF	OFF	2400 BPS
ON	OFF	OFF	4800 BPS
OFF	**ON**	**OFF**	**9600 BPS**
ON	ON	OFF	19200 BPS
OFF	OFF	ON	38400 BPS

- Factory default of Baud rate is "9600 BPS"

❑ RS-485 Termination Resistor

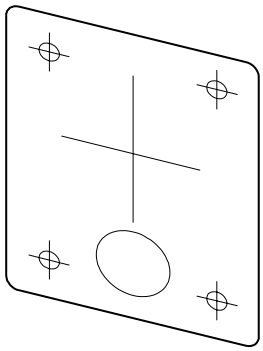


- Pin 8 is used for ON/OFF of RS-485 Termination. Normally, it must be OFF state. Especially when you have trouble with long Daisy chain style connection, turn ON this termination switch of last camera.

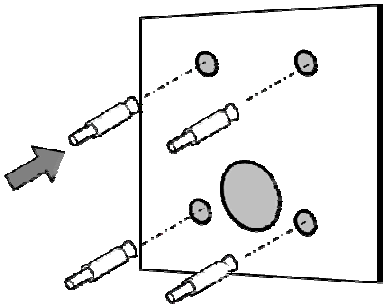
⊙ Pin 8 RS-485 Termination Resistor (On/Off)

Installation using Wall Mount Bracket

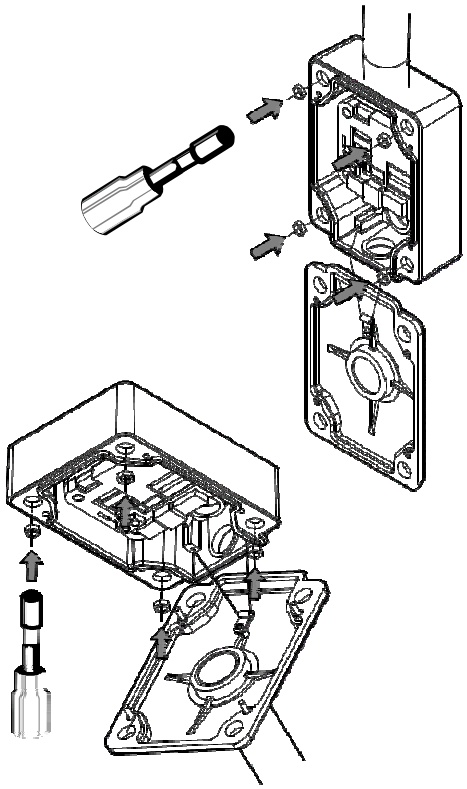
① Using the paper template, mark the holes on the wall.



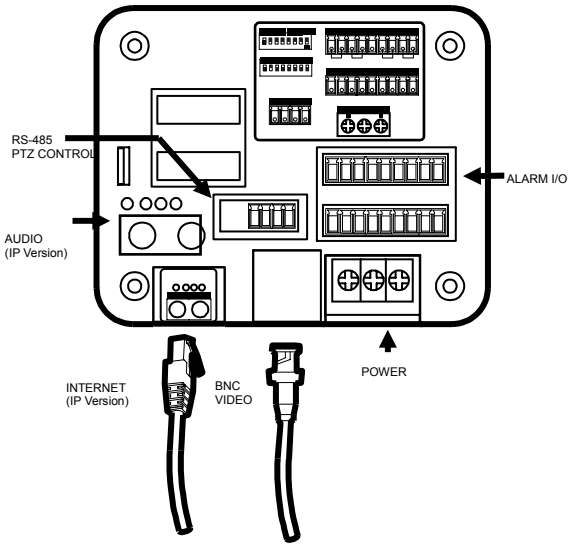
② After drilling the holes, fix the four anchor bolts into the holes.



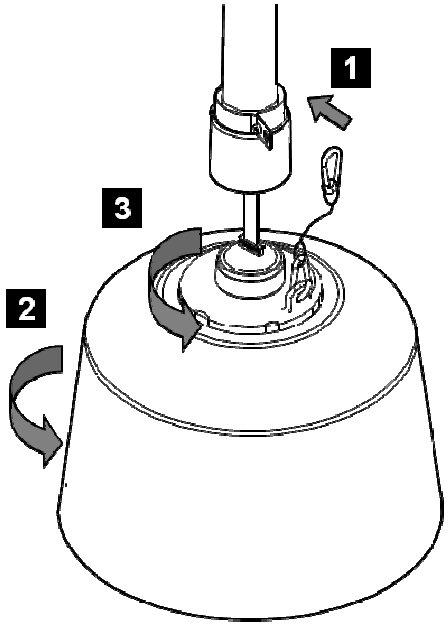
③ After locating the wall mount bracket on the anchor bolts properly. Tighten the nuts for anchor bolts



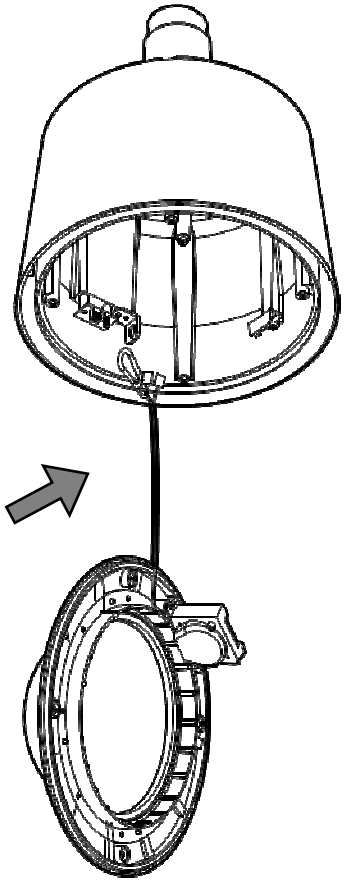
④ Connect cables to terminal blocks and BNC in the inner box of junction box. See the cabling in the next section.



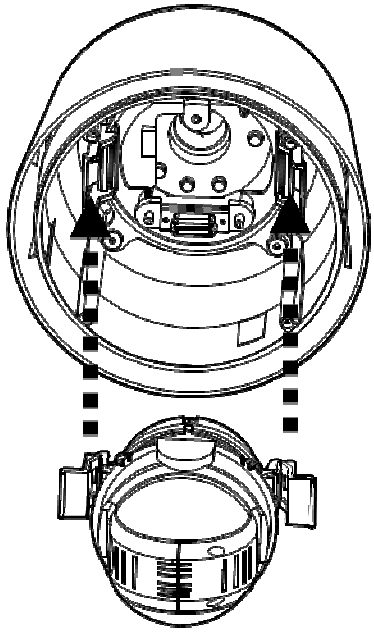
⑤ After hooking the safety cable on the hole of pipe **[1]**, attach the upper housing to wall mount bracket by turning it at least seven turns **[2]**. To fix the upper body orientation, turn the handle of double nuts to clockwise tightly **[3]**.



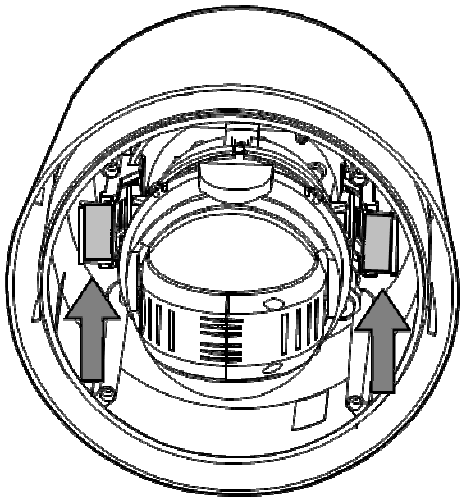
⑥ Open the dome cover to install the PTZ camera mechanism. Care must be taken dome cover is hung by internal safety cable properly. Plug fan/heater cables into the connectors in the housing.



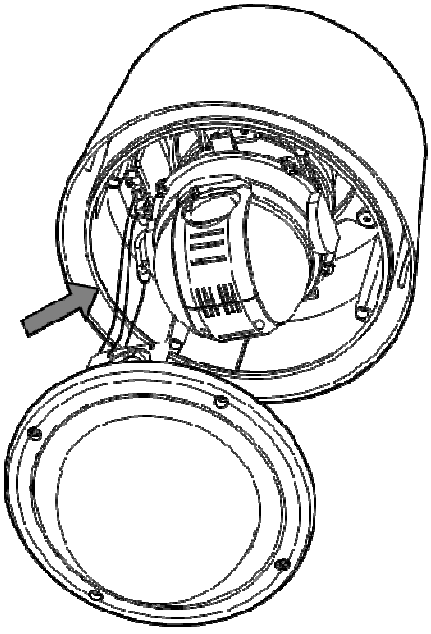
⑦ Plug the connector of cable from junction box into properly. After checking the orientation of one touch connector in the upper housing, press the PTZ mechanism into hook in the upper housing.



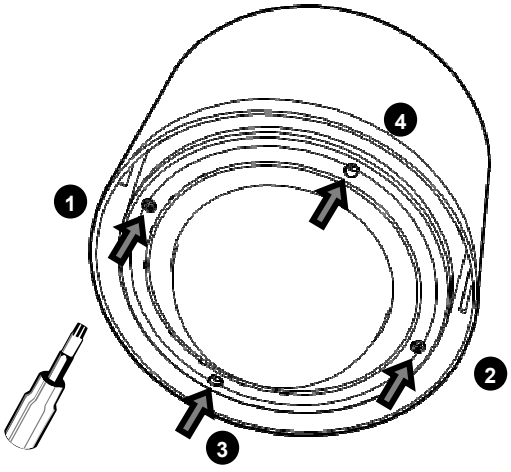
⑧ To lock the PTZ mechanism to the upper housing, press the two black handles till it sounds snap.



⑨ Close the dome cover. Care must be taken to locate dome cover by matching the "Arrow" mark.

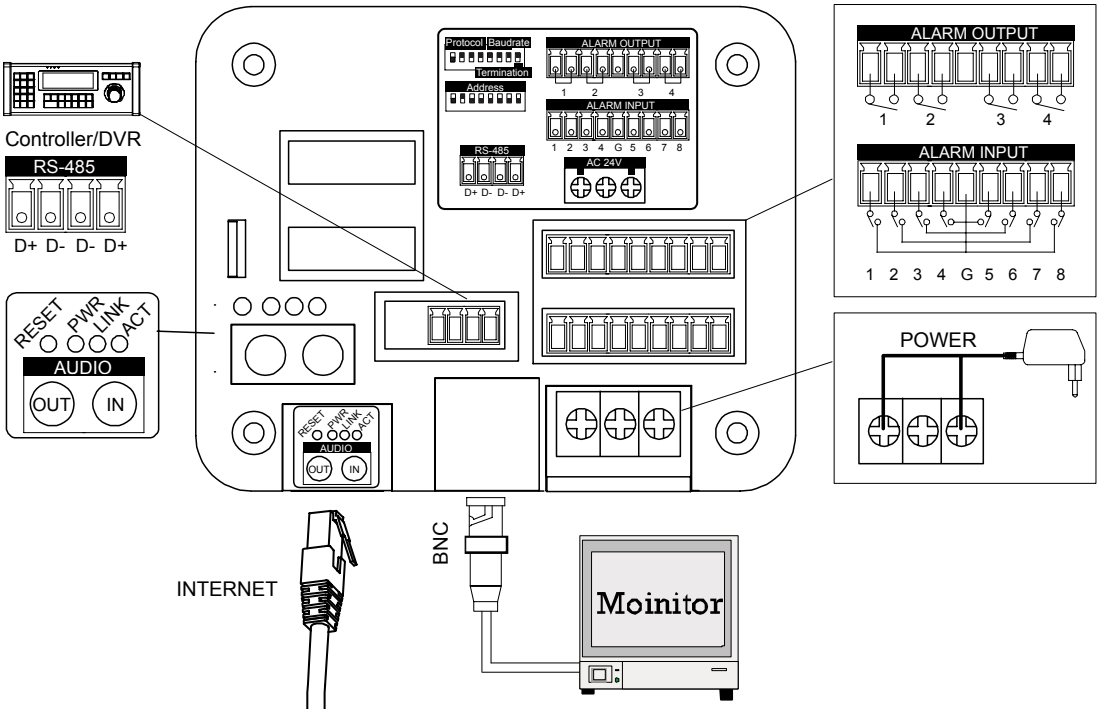


⑩ Tighten four screws on the dome cover in sequence as shown in the picture bellow.



To maintain the best sealing, the torque of each screw must be in the range between 0.5 ~ 1.0 N·m (0.37 ~ 0.73 lbf·ft).

Cabling



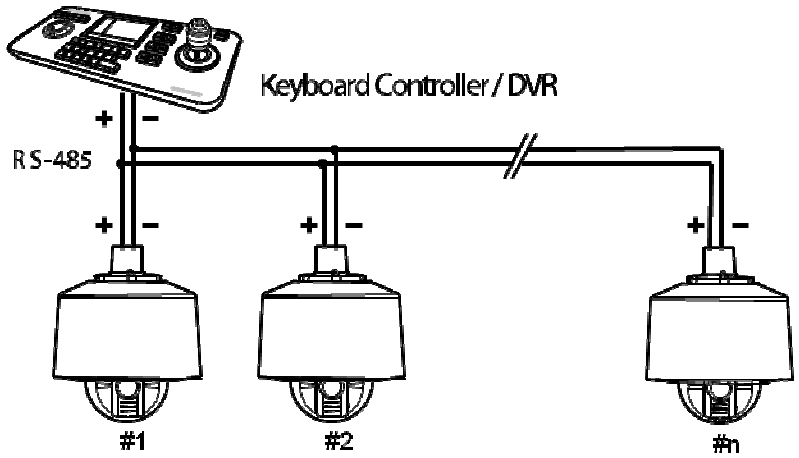
❑ Power Connection

- Please, check the voltage and current capacity of rated power carefully. Rated power is indicated in the back of main unit.

Rated Power	Input Voltage Range	Current Consumption
AC 24V	AC 19V ~29V	2.5 A

❑ RS-485 Communication

- For PTZ control, connect this line to keyboard and DVR. To control multiple cameras at the same time, RS-485 communication lines of them is connected in parallel as shown below.

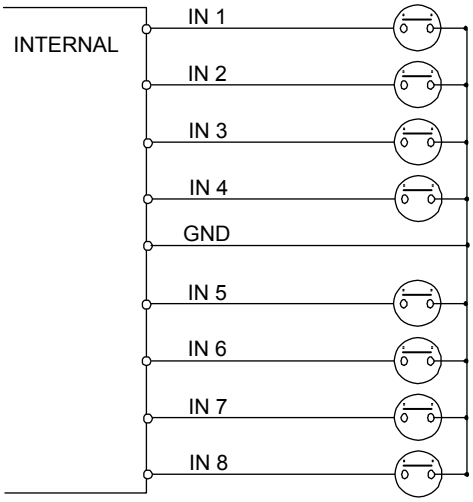


❑ Video Connection

- Connect with BNC coaxial cable.

❑ Alarm Input Connection

- Sensor Input

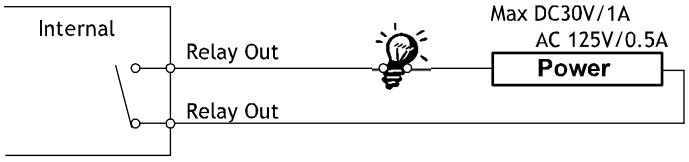


⌘ It is noted that short circuit between GND and Input pin means alarm activation.

If you want to use Alarm Input, the types of sensor must be selected in OSD menu. The sensor types are Normal Open and Normal Close If sensor type is not selected properly, the alarm can be activated reversely.

⊙ Normal Open (N.O)	Output Voltage is high state when sensor is activated
⊙ Normal Close(N.C)	Output Voltage is high state when sensor is not activated

- Alarm Output



There are 4 Alarm Outputs and all of them are Relay contact type. Therefore, you do not have to care about polarity, AC/DC, and isolations between channels. Care must be taken for the power capacity of relay contact written above.

Check points before operation

- Before power is applied, please check the cables carefully.
- The camera ID of the controller must be identical to that of the camera to be controlled. The camera ID can be checked in the System Information of OSD Menu.
- If your controller supports multi-protocols, the protocol must be changed to match to that of the camera.
- If you changed camera protocol by changing DIP switch, the change will be effective after you reboot the camera.
- Since the operation method can be different for each controller available, refer to the manual for your controller if camera can not be controlled properly.

Preset and Pattern Function Pre-Check

- Check how to operate Preset, Group, Scan and Pattern function with controller or DVR in advance to operate camera function using them. (refer to your System keyboard Manual)
- If controller or DVR has no pattern button or function, use shortcut keys with preset numbers. For more information, refer to "Reserved Preset" in this manual.

Starting OSD Menu

- Function: Using the OSD menu, Preset, Pattern, Scan, Group and Alarm Input function can be configured for each application.
- Enter Menu: <Go Preset> [95]

Reserved Preset

- Description: Some Preset numbers are reserved to special functions.
- Function:

<Go Preset> [95]	: Enters into OSD menu
<Go Preset> [131~134]	: Runs Pattern Function 1 ~ 4
<Go Preset> [141~148]	: Runs Scan Function 1 ~ 8
<Go Preset> [151~158]	: Runs Group Function 1 ~ 8
<Go Preset> [161~164]	: Sets Relay 1~4 Output to OFF
<Set Preset> [161~164]	: Sets Relay 1~4 Output to ON
<Go Preset> [170]	: Sets Camera BLC Mode to OFF
<Go Preset> [171]	: Sets Camera BLC Mode to HIGH
<Go Preset> [174]	: Sets Camera Focus Mode to AUTO
<Go Preset> [175]	: Sets Camera Focus Mode to Manual
<Go Preset> [176]	: Sets Camera Focus Mode to SEMI-AUTO
<Go Preset> [177]	: Sets Day & Night Mode to AUTO1
<Go Preset> [178]	: Sets Day & Night Mode to NIGHT
<Go Preset> [179]	: Sets Day & Night Mode to DAY
<Go Preset> [190]	: Sets OSD Display Mode to AUTO (Except Privacy Mask)
<Go Preset> [191]	: Sets OSD Display Mode to OFF (Except Privacy Mask)
<Go Preset> [192]	: Setting OSD Display Mode to ON (Except Privacy Mask)
<Go Preset> [193]	: Sets all Privacy Mask Display to OFF
<Go Preset> [194]	: Sets all Privacy Mask Display to ON
<Go Preset> [167]	: Zoom Proportional Jog ON
<Set Preset>[167]	: Zoom Proportional Jog OFF
<Go Preset>[200]	: Digital Zoom ON
<Go Preset>[201]	: Digital Zoom OFF

Preset

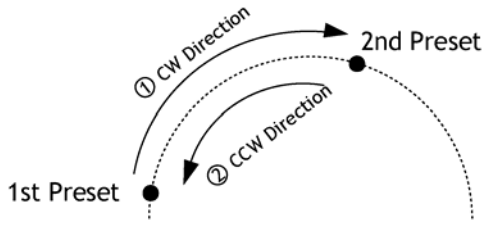
- Function — Max. 127 positions can be stored as Preset position. The Preset number can be assigned from 1 to 128, but 95 is reserved for starting OSD menu.

  Camera characteristics (i.e. White Balance, Auto Exposure) can be set up independently for each preset and they are adjusted by using OSD menu. Four relay outputs can be controlled in conjunction with one Preset.

- Set Preset — <Set Preset> [1~128]
- Run Preset — <Go Preset> [1~128]
- Delete Preset — To delete Preset, use OSD menu.

Scan

- Function — By using Scan function, you can make camera to move between 2 Preset positions repeatedly. When Scan function runs, camera moves from the preset assigned as the 1st point to the preset assigned as the 2nd point in CW(Clockwise) direction. Then camera moves from the preset assigned as the 2nd point to the preset assigned as the 1st point in CCW(Counterclockwise) direction.



  In case that the preset assigned as the 1st point is same as the preset assigned as the 2nd point, camera turns on its axis by 360° in CW(Clockwise) direction and then it turns on its axis by 360° in CCW(Counterclockwise) direction.

  Speed can be set up from 1°/sec to 180°/sec.

- Set Scan — To set Scan, use OSD menu.
- Run Scan — Method1) <Run Scan> [Scan NO.] [Enter]

  Method2) <Go Preset> [Scan NO.+140] ex) Run Scan 2 : <Go Preset> [142]

- Delete Scan — To delete Scan, use OSD menu.

Pattern

● Function

Pattern Function is that a camera memorizes the path (mostly curve path) by joystick of controller for assigned time and revives the path exactly as it memorized.

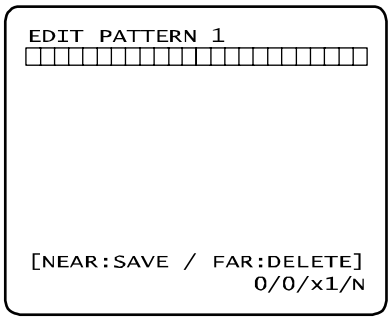
4 Patterns are available and Maximum 1000 communication commands can be stored in a pattern.

● Set Pattern

Pattern can be created by one of following two methods.

Method 1) <Set Pattern> [Pattern NO.]

- Pattern editing screen is displayed as bellow.



- Movement by Joystick and preset movement can be memorized in a pattern.
- The rest memory size is displayed in progress bar.
- To save the recording, press **NEAR** key and to cancel, press **FAR** key.

Method 2) OSD Using OSD Menu: See the section "How to use OSD Menu".

● Run Pattern

Method 1) <Run Pattern> [Pattern NO.] [Enter] ex) Run Pattern 2 : <Run Pattern> [2] [Enter]

Method 2) <Go Preset> [Pattern NO.+130] ex) Run Pattern 2: <Go Preset> [132]

● Delete Pattern

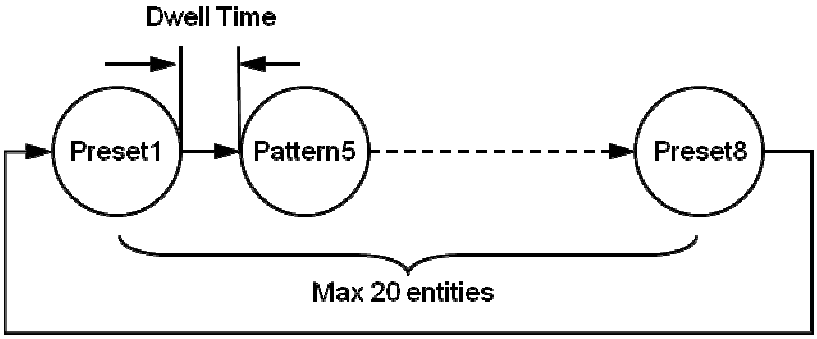
Use OSD menu to delete a Pattern.

✍ When the pattern is saved or executed, the PAN/TILT is operated with Auto Flip OFF mode.

Group

● Function

The Group function allows running sequence of Presets, Pattern and/or Scans. Max 8 Group can be stored. Each Group can have max 20 action entities which can be preset, pattern or Scan. Preset speed can be set up and the repeat number of Pattern & Scan can be set up in Group setup. Dwell time between actions can be set up also.



● Set Group

Use OSD Menu to create a Group.

● Run Group

Method1) <Run Group> [Group NO] [Enter]

Method2) <Go Preset> [Group NO.+150] ex) Run Group 7 : <Go Preset> [157]

● Delete Group

Use OSD Menu to delete.

Schedule

- Function — The Schedule function allows running an appropriate function like Preset, Scan, Group, Pattern, Home move at designated day and time. For example, if you setup a rule Tuesday at 9:00AM and Preset 1 (say Main Gate), the camera will move to main gate every Tuesday at 9:00AM. If you choose Weekday, camera will move to Main gate everyday except weekend.

  It is noted that due to the real time clock, the time data will be kept regardless of blackout. The initial time and day setup is essential to proper Schedule function.

- Set Schedule — Use OSD Menu to create a Schedule
- Run Schedule — Use OSD Menu of Schedule Master Enable
- Delete Schedule — Use OSD Menu to delete.

Other Functions

- **Preset Lock** — This function is made to protect preset data from unauthorized overwriting. If Preset Lock is ON, Preset save command using Hot Key is disabled while Preset save using OSD Menu is acceptable.

- **Power Up Action** — This function enables to resume the last action executed before power down. Most of actions such as Preset, Pattern, Scan and Group are available for this function but Jog actions are not available to resume.

- **Auto Flip** — In case that tilt angle arrives at the top of tilt orbit (90°), zoom module camera keep moving to opposite tilt direction (180°) to keep tracing targets. As soon as zoom module camera passes through the top of tilt direction(90°), images should be reversed automatically and F appears in screen. If this function is set to OFF, tilt movement range is 0 ~ 90°.

- **Parking Action** — This function enables to locate the camera to specific position automatically if operator doesn't operate the controller for a while. The Park Time can be defined as an interval from 5 seconds to 4 hours.

- **Alarm Input** — 8 Alarm Inputs are used. If an external sensor is activated, camera can be set to move to corresponding preset position. It is noted that the latest alarm input is effective if multiple sensors are activated.

- **Alarm Output** — There are 4 Ch. of Alarm Outputs and all of them can be assigned to a certain Preset number. For example, if you assign Preset 5 to AO2, calling Preset 5 result in turning On of AO2.

- **Privacy Zone Mask** — To protect privacy, MAX. 8 Privacy Masks can be created on the arbitrary position to hide objects such as windows, shops or private house. With Spherical Coordinates system, powerful Privacy Zone Mask function is possible.

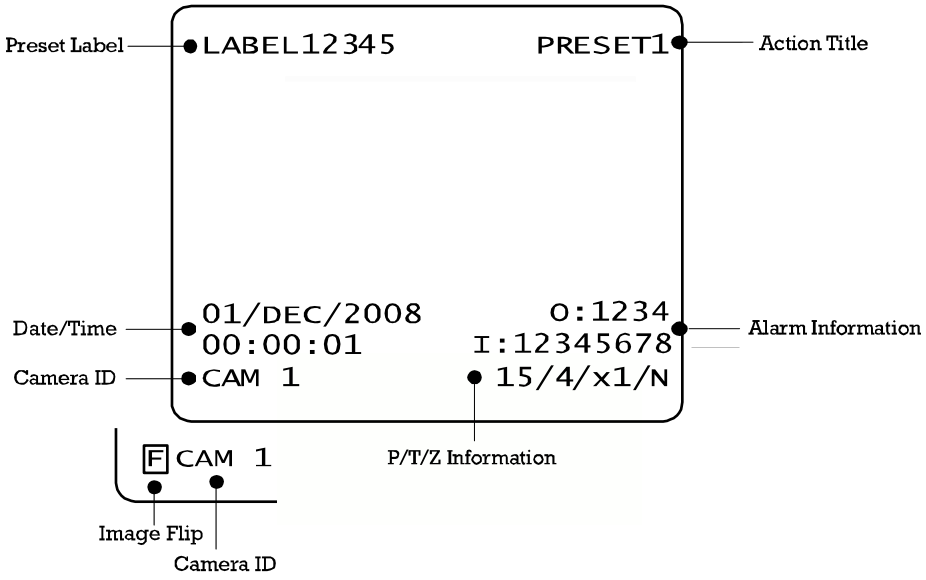
- **GENERAL/SPECIAL Image Setup** — WB (White Balance) and AE (Auto Exposure) can be set up independently for each preset. There are 2 modes, "General" mode & "Special" mode. The General mode means that WB or AE can be set up totally and simultaneously for all presets in " CAMERA SETUP" menu. The Special mode means that WB or AE can be set up independently or separately for each preset in each preset setup menu. Each Special WB/AE value should activate correspondingly when camera arrives at each preset location.

  During jog operation, General WB/AE value should be applied. All Special WB/AE value will not be changed although General WB/AE value change.

- **Semi Auto Focus** — This mode exchanges focus mode automatically between Manual Focus mode and Auto Focus mode by operation. Manual Focus mode activates in preset operation and Auto Focus mode activates during jog operation. With Manual mode at presets, Focus data is memorized in each preset in advance and camera calls focus data in correspondence with presets as soon as camera arrives at a preset. It should shorten time to get focuses.

  Focus mode changes to Auto Focus mode automatically when jog operation starts.

OSD Display of Main Screen



- P/T/Z Information — Current Pan/Tilt angle in degree, zoom magnification and a compass direction.
- Camera ID — Current Camera ID(Address).
- Action Title — Followings are possible Action Titles and their meaning.

  "SET PRESET ×××"

  "PRESET ×××"

  "PATTERN ×"

  "AUP×/PRESET ×××"

  "UNDEFINED"
- Preset Label — The Label stored for specific Preset.
- Alarm Information — This information shows current state of Alarm Input. The "I" means Input and "O" is output. If an Input is **ON** state it will show the number of input. If an Input is **OFF** state, '–' will be displayed. In the same way "O:1" means output 1 is ON "O:-" is OFF.

  Ex) When Point 2 of inputs are **ON,** and Output 1 is On, OSD will show as below

```
O:1---
I:-2------
```

- Image Flip — Shows that images are currently reversed by Auto Flip Function.
- Date/Time — Displays Current Date and Time.

General Rules of Key Operation for Menu

- The menu items surrounded with < > always has its sub menu.
- For all menu level, to go into sub menu, press **NEAR** key.
- To go to up-one-level menu, press **FAR** key.
- To move from items to item in the menu, use joystick in the **Up/Down** or **Left/Right**.
- To change a value of an item, use **Up/Down** of the joystick in the controller.
- Press **NEAR** key to save values and Press **FAR** key to cancel values.

Main Menu

```
ROOT MENU
------------------------
→<SYSTEM INFORMATION>
  <DISPLAY SETUP>
  <MOTION SETUP>
  <FUNCTION SETUP>
  <CAMERA SETUP>
  <SYSTEM SETUP>
  <SYSTEM INITIALIZE>

  EXIT
```

● System Information	Shows info and current configuration.
● Display Setup	Enable/Disable of OSD display on Main Screen.
● Motion Setup	Setup for motion related settings
● Function Setup	Setup for various functions such as Preset, Auto Pan, Pattern, Group and Schedule.
● Camera Setup	Configure Camera related functions and data
● System Setup	Configure for Basic system setup.
● System Initialize	Initializes system configuration and sets all data to factory default configuration.

System Information

```
SYSTEM INFORMATION
-------------------------
 FIRMWARE VER     1.011P
 COLOR SYSTEM     NTSC
 PROTOCOL         SAMSUNG
 BAUD RATE        9600
 ADDRESS          255


→BACK
 EXIT
```

- Firmware Ver. — Shows current firmware version of camera.
- Color System — Shows current analog video system of the camera.
- Protocol — Shows current Protocol for PTZ control
- Baud rate — Shows current Baud rate of PTZ control.
- Address — Shows current Camera ID for PTZ control.

Display Setup

```
DISPLAY SETUP
-------------------------
→CAMERA ID        ON
 PTZ INFORMATION  AUTO
 ACTION TITLE     AUTO
 RESET LABEL      AUTO
 ALARM I/O        AUTO
 DATE/TIME        ON
 <PRIVACY ZONE>

 BACK
 EXIT
```

This menu defines Enable/Disable of OSD display on Main Screen. If an item is set to be AUTO, the item is displayed only when the value of it is changed.

- Camera ID — [ON/OFF]
- PTZ Information — [ON/OFF/AUTO]
- Action Title — [ON/OFF/AUTO]
- Preset Label — [ON/OFF/AUTO]
- Alarm I/O — [ON/OFF/AUTO]
- Date/Time — [ON/OFF]
- <Privacy Zone> — Start Privacy Zone Mask setup Menu.

PRIVACY ZONE MASK Setup

```
PRIVACY ZONE
------------------------
->MASK NO          1
                   UNDEFINED
  DISPLAY          OFF
  CLEAR MASK       CANCEL
  <EDIT MASK>


  BACK
  EXIT
```

Select area in image to mask.

- Mask No [1~8] 36x, 37x model, [1~4] 30x model

  Select Mask number. If the selected mask has already data, camera moves as it was set. Otherwise, "UNDEFINED" will be displayed under "Mask NO".

- Display [ON/OFF]

  Sets if camera makes mask shows or not on images.

- Clear Mask [CANCEL/OK]

  Deletes data in the selected mask NO.

❑ Privacy Zone Area Setup

```
EDIT MASK 1
------------------------




MOVE TO TARGET POSITION
[NEAR:SELECT/FAR:CANCEL]
                   0/0/X1/N
```

Move camera to area to mask. Then the menu to adjust mask size will be displayed.

↗ If the tilt angle is located in the range between 70° to 110°, you can not set up privacy zone mask.

↗ If tilt angle over 110° (image flipped region) is designated, camera will automatically move to identical poison by changing tilt angle less than 70° and moving pan angle 180 relatively.

❑ Privacy Zone Size Adjustment

```
EDIT MASK 1
------------------------


[ZOOM : COLOR CHANGE]
[◂▸:ADJUST MASK WIDTH]
[▴▾:ADJUST MASK HEIGHT]
[NEAR:SAVE / FAR:CANCEL]
```

Adjust mask size. Use joystick or arrow buttons to adjust mask size.

- ◂ ▸ (Left/Right) Adjusts mask width.
- ▴ ▾ (Up/Down) Adjusts mask height.
- Zoom In/Out Change Color of mask (PTI-M300, M302 Only).

↗ It is noted that during PAN/TILT control like jog action, the object behind the privacy mask can be disclosed in a short period of time.

↗ To hide a certain zone completely regardless of high speed PT motions, it is recommended that the size of mask must be 20% bigger than original target size

Motion Setup

```
MOTION SETUP
------------------------
→PRESET LOCK      OFF
 PWR UP ACTION    ON
 AUTO FLIP        ON
 JOG MAX SPEED    140/SEC
 JOG DIRECTION    INVERSE
 FRZ IN PRESET    OFF
 <PARKING ACTION SETUP>
 <ALARM INPUT SETUP>
 BACK
 EXIT
```

Setup the general functions of Pan/Tilt motions.

- Preset Lock [ON/OFF]

  If Motion Lock is set to ON, it is impossible to set up and delete Preset, Scan, Pattern and Group. It is possible only to run those functions. To set up and delete those functions, enter into OSD menu.

- Power Up Action [ON/OFF]

  Refer to **Other Functions** section in Page 23.

- Auto Flip [ON/OFF]

  Refer to **Other Functions** section in Page 23.

- Jog Max Speed [2°/sec ~200°/sec]

  Sets maximum jog speed. Jog speed is inversely proportional to ratio of zoom. As zoom magnification goes up, pan/tilt speed goes down.

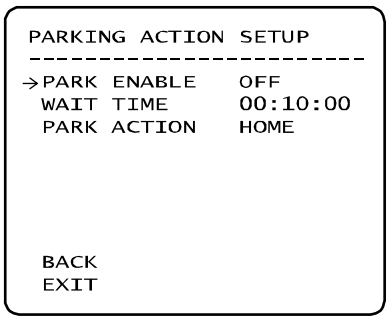
- Jog Direction [INVERSE/NORMAL]

  If you set this to 'Normal', the view in the screen is moving same direction with jog tilting. If 'Inverse' is selected, the view in the screen is moving reversely.

- Freeze in Preset [ON/OFF]

  At start point of preset movement, camera starts freezing the image of start point. Camera keeps displaying the image of start point during preset movement and does not display the images which camera gets during preset movement. As soon as camera stops at preset end point, camera starts displaying live images which it gets at preset end point.

❑ Parking Action Setup



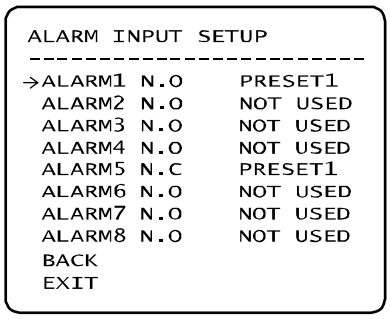
If Park Enable is set to ON, camera runs assigned function automatically if there is no PTZ command during assigned "Wait Time".

- Park Enable [ON/OFF]
- Wait Time [5 seconds ~ 4 hour]

  The time is displayed with "hh:mm:ss" format and you can change this by 1 sec unit.
- Park Action [HOME/PRESET/PATTERN/AUTOPAN/GROUP]

  Ex) If HOME is selected for Park Action, camera will move to home position when there is no PTZ command during assigned "Wait Time."

❑ Alarm Input Setup



Match the Alarm sensor input to one of Preset positions. If an external sensor is activated, camera will move to corresponding preset position when this item is predefined.

- Alarm Type [Normal OPEN(N.O) / Normal CLOSE](N.C)]

  Sets sensor input type.
- Alarm Action [NOT USED/HOME/PRESET 1~128/GROUP 1~8, PATTERN1~4, GROUP 1~4]

  For each Alarm input, you can assign counteraction functions (Preset, Auto Pan, Pattern, Group).

Function Setup

```
FUNCTION SETUP
-------------------------
→<PRESET SETUP>
 <AUTO PAN SETUP>
 <PATTERN SETUP>
 <GROUP SETUP>
 <SCHEDULE SETUP>


 BACK
 EXIT
```

Configure 5 Special Functions with this menu

- Preset Setup — 127 Presets from the number 1 to 128 can be assigned excluding preset 95 reserved for Menu.
- Auto Pan Setup — Up to 8 Auto Pans are available, which makes camera to move slowly between two preset points.
- Pattern Setup — Up to 4 patterns can be stored in the dome.

  In this function, path data created by manual move of Joystick are recorded and you can playback the identical path automatically whenever required.
- Group Setup — Up to 8 Groups can be defined.

  In a Group, max 20 entities are assigned from any combinations of Preset/Auto Pan/Pattern. If you run a Group, camera will execute each entry sequentially.
- Schedule Setup — 7 rules of Schedule can be assigned by day and time. Appropriate actions (such as Home, Preset, Auto Pan, Pattern and Group) can be defined for each rule. Also, it is possible to use Weekday and Weekend in a rule to make it simple.

PRESET Setup

```
PRESET SETUP
-------------------------
→PRESET NO.       1

 <EDIT SCENE>
 <EDIT LABEL> WINDOWS
 CLR PRESET   CANCEL
 CAM ADJUST   GENERAL
 ALARM OUT    ----

 BACK
 EXIT
```

- **Preset Number** [1~128]

  If a selected preset is already defined, camera moves to pre-defined position and preset characteristics such as Label and Relay Outputs show on monitor. If a selected preset is not defined, "UNDEFINED" shows on monitor.

- **Edit Preset Scene** Redefine current Preset scene position (i.e. PTZ).

- **Edit Preset Label** Edits Label to show on monitor when preset runs. MAX. 10 alphabets are allowed.

- **Clear Preset** [CANCEL/OK]

  Delete current Preset data

- **CAM Adjust** [GENERAL/SPECIAL]

  WB(White Balance) and AE(Auto Exposure) can be set up independently for each preset. There are 2 modes, "General" mode & "Special" mode. The General mode means that WB or AE can be set up totally and simultaneously for all presets in "CAMERA SETUP" menu.

  The Special mode means that WB or AE can be set up independently or separately for each preset in each preset setup menu. Each Special WB/AE value should activate correspondingly when camera arrives at each preset location. During jog operation, General WB/AE value should be applied.

  All Special WB/AE value should not change although General WB/AE value changes. If "Special" is selected, Menu to set WB/AE shows on monitor.

- **Alarm out** State of four alarm outputs can be freely controlled in conjunction with Preset run. The character "- " means OFF state and the number representing each bit means ON.

  Ex) If it is set to be -23-, Output relay 2, 3 will be ON and 1, 4 will be OFF, when you run this Preset.

❑ Edit Preset Scene

```
EDIT SCENE - PRESET 1
-----------------------




MOVE TO TARGET POSITION
[NEAR:SAVE / FAR:CANCEL]
                  0/0/x1/N
```

① Using joystick, move camera to desired position.

② By pressing **NEAR** key, save current PTZ data.

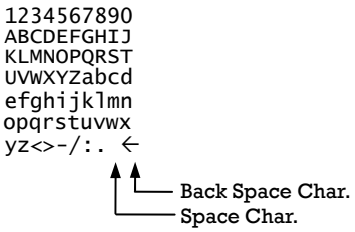
③ Press **FAR** key to cancel.

❑ Edit Preset Label

```
EDIT LABEL   -  PRESET 1
--------------------------
→[          ]
  ----------
  1234567890  OK
  ABCDEFGHIJ  CANCEL
  KLMNOPQRST
  UVWXYZabcd
  efghijklmn
  opqrstuvwx
  yz<>-/:. ←
```

① Edits label to show on monitor when camera arrives at presets. In Edit Label menu, a reverse rectangular is cursor. As soon as finishing selecting alphabet, cursor moves to the next digit.

② Using **Left/Right/Up/Down** of joystick, move to an appropriate character from the Character set. To choose that character, press the **NEAR** key.



If you want to use blank, choose Space character (" "). If you want to delete a character before, use back space character (" ←").

③ If you complete the Label editing, move cursor to "OK" and press **NEAR** key to save completed label. To abort current change, move cursor to "Cancel" and press **NEAR** key.

Scan Setup

```
SCAN SETUP
--------------------------
→SCAN NO.      1
 1ST POS.          NOT USED
 2ND POS.          NOT USED

 SCAN SPEED 30/SEC
 CLEAR SCAN CANCEL


 BACK
 EXIT
```

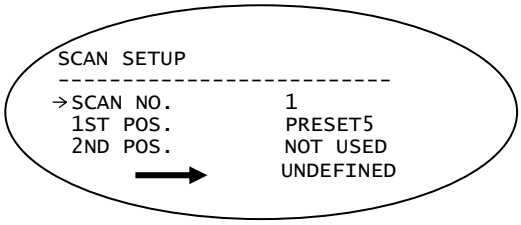
● Scan Number [1~8]

Selects Scan number to edit. If a selected Scan has not defined, "NOT USED" is displayed in 1st Position and 2nd Position

● 1st Position [PRESET 1~128]

2nd Position

Set up the 2 position for Scan function. If a selected preset is not defined, "UNDEFINED" will be displayed as shown below.



When scan function runs, camera moves from the preset assigned as the 1st point to the preset assigned as the 2nd point in CW(Clockwise) direction. Then camera moves from the preset assigned as the 2nd point to the preset assigned as the 1st point in CCW(Counterclockwise) direction. In case that the preset assigned as the 1st point is same as the preset assigned as the 2nd point, camera turns on its axis by 360° in CW direction and then it turns on its axis by 360° in CCW direction.

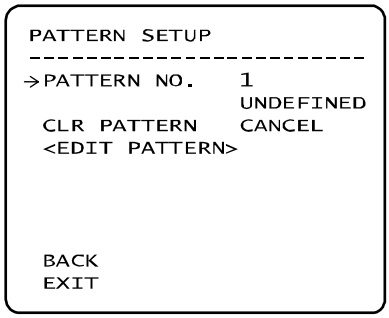
● Scan Speed [1°/sec ~180°/sec]

Sets Scan speed from 1°/sec to 180°/sec.

● Clear Scan [CANCEL/OK]

Deletes current Scan data.

Pattern Setup



- Pattern Number [1~4]

  Selects Pattern number to edit.

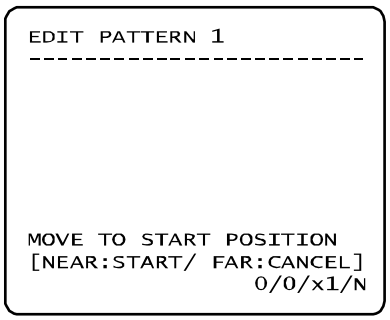
  If a selected pattern number is not defined, "UNDEFINED" will be displayed under selected pattern number.

- Clear Pattern [CANCEL/OK]

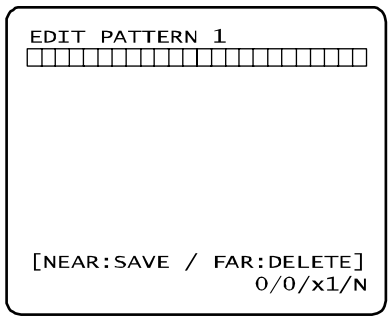
  Deletes data in current pattern

- Edit Pattern Starts editing pattern.

❑ Edit Pattern



① By using Joystick, move to start position with appropriate zoom. To start pattern recording, press **NEAR** key. To exit this menu, press **FAR** key.



② Move camera with joystick of controller or run preset function to memorize the path (mostly curve path) in a selected pattern. The total memory size and the rest memory size is displayed in the form of bar. Maximum 1,000 communication commands can be stored in a pattern.

③ To save data and exit, press **NEAR** key. To cancel recording and delete record data, press **FAR** key.

Group Setup

```
GROUP SETUP
--------------------------
→GROUP NO.        1
                UNDEFINED
 CLEAR GROUP     CANCEL
 <EDIT GROUP>



 BACK
 EXIT
```

- Group Number [1~8]

  Selects Group number to edit.

  If a selected Group number is not defined, "UNDEFINED" will be displayed under selected Group number.

- Clear Group [CANCEL/OK]

  Deletes data in current Group

- Edit Group Starts editing Group.

❑ Edit Group

```
EDIT GROUP      1
--------------------------
→NO. ACTION NO. DWELL OPT
--------------------------
  1 NONE
  2 NONE
  3 NONE
  4 NONE
  5 NONE
--------------------------
 SAVE
 CANCEL          [NEAR:EDIT]
```

① Press **Near** key in "NO" list to start Group setup.

```
EDIT GROUP      1
--------------------------
 NO. ACTION NO. DWELL OPT
--------------------------
→ 1 NONE
  2 NONE
  3 NONE
  4 NONE
  5 NONE
--------------------------
 SAVE       [NEAR:EDIT ACT]
 CANCEL     [FAR :EDIT END]
```

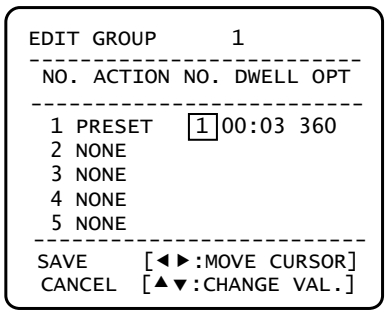
② Note that MAX. 20 Functions are allowed in a Group. Move cursor up/down and press **Near** key to set up.

```
EDIT GROUP      1
--------------------------
 NO. ACTION NO. DWELL OPT
--------------------------
  1[NONE  ]
  2 NONE
  3 NONE
  4 NONE
  5 NONE
--------------------------
 SAVE     [◄►:MOVE CURSOR]
 CANCEL   [▲▼:CHANGE VAL.]
```

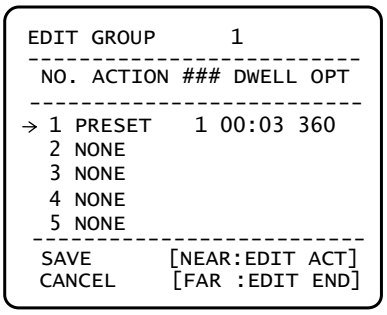
③ Set up Action, Dwell time and Option. Note that selected item is displayed in reverse. Move cursor **Left**/**Right** to select items and move cursor **Up**/**Down** to change each value.

- Action NO. [NONE/PRESET/SCAN/PATTERN]
- DWELL [0 second ~ 4 minutes]

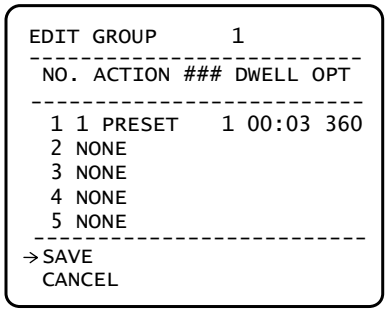
  Sets Dwell Time between functions
- OPT Option. It represents preset speed (2~360) when preset is selected. It should be the number of repetition (1~255) when Pattern or Scan is selected for Action



④ Set up items such as Action, NO., Dwell and OPT.



⑤ After finishing setting up an Action, press **Near** key to one-upper-level menu (Step ②). Move cursor **Up/Down** to select Action number and repeat Step ② ~ Step ④ to edit selected Group.



⑥ After finishing setting up all Actions, press **FAR** key to exit. Then cursor should be moved to "SAVE." Press **Near** key to save data.

Schedule Setup

```
SCHEDULE SETUP
--------------------------
→MASTER ENABLE          ON
   DAY  TIME   ACT  NO   ON
 1 UNDEFINED
 2 UNDEFINED
 3 UNDEFINED
 4 UNDEFINED
 5 UNDEFINED
 6 UNDEFINED
 7 UNDEFINED
 BACK
```

- Master Enable [ON/OFF]
  Decide whether Schedule function is active or not.
- Clear Schedule [CANCEL/OK]
  Delete all data in current Menu
- Edit Schedule Start editing Schedule.

❑ Edit Schedule

```
SCHEDULE SETUP
--------------------------
 MASTER ENABLE          ON
   DAY  TIME   ACT  NO   ON
→1 UNDEFINED
 2 UNDEFINED
 3 UNDEFINED
 4 UNDEFINED
 5 UNDEFINED
 6 UNDEFINED
 7 UNDEFINED
 BACK
```

④ After move the Cursor to the number by using **Up/Down keys, press** "Near"(Enter) Key to edit.

```
SCHEDULE SETUP
--------------------------
 MASTER ENABLE          ON
   DAY TIME  ACT   NO   ON
→1 [MON] 00:00 HOM      OFF
 2 UNDEFINED
 3 UNDEFINED
 4 UNDEFINED
 5 UNDEFINED
 6 UNDEFINED
 7 UNDEFINED
 BACK
```

⑤ Each field can be selected by **Left/Right** keys and the values in the field are changed using **Up/Down** keys.

The meaning of each value:

DAY	Days: MON > TUE > WED> THU > FRI > SAT > SUN
	WKD: Weekday
	ALL: All days(Everyday)
TIME	24hour Format
ACT	PRS(Preset), SCN(Scan), PTN(Pattern), GRP(Group)
	HOM(Home)
ON/OFF	Decide to make this rule effective or not

If you finish a rule, press **Near** key to select another rule.

Repeat this procedure to fill up the schedule in mind.

```
SCHEDULE SETUP
--------------------------
 MASTER ENABLE          ON
   DAY TIME  ACT   NO   ON
→1 MON 01:20 HOM        ON
 2 WEN 07:35 PRS   12   ON
 3 THU 11:40 SCN    3   ON
 4 SAT 15:17 PAT    1   ON
 5 WEK 23:00 HOM        ON
 6 UNDEFINED
 7 UNDEFINED
 BACK
```

⑥ Example: see left setup.

- The second rule means camera will move to Preset 12 position at 7:35 on every Wednesday.

* Note: If there are rules conflicts to each other, the higher number is, the higher priority has.

* Note: If you assign undefined function, there will be no action.

* Hint: Using reserved Preset, you can make various schedules. For example, PRS179 are PRS178 are Day and Night mode respectively. (Refer to Reserved Presets in page 19 of this manual.)

CAMERA SETUP

Setup the general functions of zoom camera module

```
ZOOM CAMERA SETUP
-------------------------
→FOCUS MODE       SEMIAUTO
 DIGITAL ZOOM     ON
 IMAGE FLIP       OFF
 FLICKERLESS      OFF
 <WHITE BALANCE SETUP>
 <AUTO EXPOSURE SETUP>


 BACK
 EXIT
```

● Focus Mode [AUTO/MANUAL/SEMIAUTO]

Sets camera focus mode.

○ SEMIAUTO Mode

This mode exchanges focus mode automatically between Manual Focus mode and Auto Focus mode. Manual Focus mode activates in preset operation and Auto Focus mode activates when jog operation starts.

With Manual mode at presets, Focus data is memorized in each preset in advance and camera calls focus data in correspondence with presets as soon as camera arrives at a preset.

● Digital Zoom [ON/OFF]

Sets digital zoom function to ON/OFF. If this is set to OFF, optical zoom function runs but zoom function stops at the end of optical zoom magnification.

● Image Flip [ON/OFF]

To display Upside down image.

● Flickerless [ON/OFF]

Turn on or off the Flickerless function. In this function, AE mode becomes Shutter Priority mode and shutter speed value will be fixed to 1/100 sec.

❑ White Balance Setup

```
WB SETUP
-------------------------
→WB MODE      AUTO
 ●RED  ADJUST     ---
 ●BLUE ADJUST     ---




 BACK
 EXIT
```

● WB Mode [AUTO/MANUAL]

In Manual mode, Red and Blue level can be set up manually

● Red Adjust [0~255]

● Blue Adjust [0~255]

❑ Auto Exposure Setup – 30x, 37x

```
AE SETUP - GLOBAL
-------------------------
→BACK LIGHT       OFF
 DAY/NIGHT        AUTO
 BRIGHT           25
 IRIS             AUTO
 SHUTTER          ESC
 AGC              NORMAL
 DNR              MIDDLE
 SENS-UP          <AUTO>
 BACK
 EXIT
```

- Backlight [OFF/HIGH/MIDDLE/LOW] *

  [OFF/WDR/HLC] **

  Sets Backlight related functions. Especially, HLC function helps removing high light portion of image (like head light beam in the dark) to get better contrast of the rest.

- Day/Night [AUTO/DAY/NIGHT]

  AUTO1 exchanges Day/Night mode faster than AUTO2.

- Brightness [0~100]

  Adjusts brightness of images. Iris, Shutter Speed and Gain are adjusted automatically in correspondence with this value.

- IRIS [AUTO/MANUAL(0~100)] *

  [AUTO/MANUAL(0~17)] **

  If Iris is set to Auto, Iris should have highest priority in adjusting AE and Shutter Speed should be fixed.

  If Iris is set to Manual, Iris should be fixed and Iris has lower priority in adjusting AE, in comparison with others.

- Shutter Speed [ESC/A. Flicker/Manual]

  If Iris is set to Manual and Shutter Speed is set to ESC, Shutter Speed should have highest priority. If Shutter Speed is set to A. Flicker, to remove Flicker, Shutter Speed should be set to 1/100 sec. for NTSC and 1/120 for PAL.

  (×128~1/120000 sec) *

  (×256~1/120000 sec) **

- AGC [OFF/NORMAL/HIGH]

  Enhances image brightness automatically in case that luminance level of image signal is too low.

- DNR [OFF/LOW/MIDDLE/HIGH]

  Enhances images by deducting noises when gain level of images is too high.

- SENS-UP [AUTO(2~128x)/OFF] *

  [AUTO(2~256x)/OFF] **

  Activates Slow Shutter function when luminance of image (signal) is too dark.

  It is possible to set up the maximum number of frames piled up one on another by Slow Shutter function.

* Note: Function or Range for PTI-M301 Model

** Note: Function or Range for PTI-M302 Model

❑ Auto Exposure Setup – 36x

```
AE SETUP
------------------------
→WDR/BLC          ALL OFF
 DAY/NIGHT        AUTO
 AE MODE          AUTO
 ■ IRIS LEVEL     ---
 ■ GAIN LEVEL     ---
 ■ SHUTTER SPD    ---
 ■ BRIGHTNESS     ---

 BACK
 EXIT
```

● WDR/BLC [ALL OFF / WDR ON / BLC ON]

Select WDR(Wide Dynamic Range) or BLC(Backlight Compensation) function. All OFF means turning off both functions.

● Day/Night [AUTO/DAY/NIGHT]

AUTO exchanges Day / Night

● AE MODE AUTO / MANUAL / IRIS / SHUTTER / BRIGHT

AUTO: Full Auto mode for AE function

MANUAL: In manual mode. IRIS, GAIN, SHUTTER SPEED can be changed in this mode.

IRIS: Iris priority mode. You can change IRIS while others are adjusted automatically.

SHUTTER: Shutter priority mode. Shutter speed can be changed while others are adjusted automatically.

BRIGHT: In this mode, you can assign AE value in terms of Brightness.

● IRIS [Works when AE MODE is MANUAL or IRIS model]

Range: CLOSE/F1.6/F2/F2.4/F2.8/F3.4/F4/F4.8/F5.6/ F6.8/F8/ F9.6/F11/F14/F16/F19/F22/F28. (18 steps)

● GAIN [Works when AE MODE is MANUAL]

Enhances image brightness automatically in case that luminance level of image signal is too low.

Range: 3/0/2/4/6/8/10/12/14/16/18/20/22/24/26/28dB (16 steps)

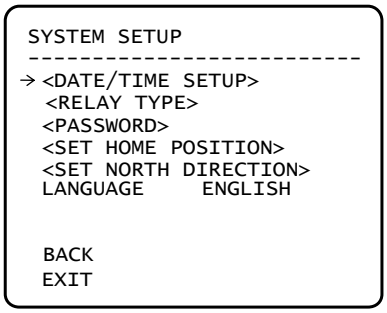
●Shutter Speed [Works when AE MODE is MANUAL or SHUTTER mode]

1/1,1/2,1/4,1/8,1/15,1/30,1/60,1/90,1/100,1/125,1/180, 1/250,1/350,1/500,1/725,1/1000,1/1500,1/2000,1/4000, 1/6000,1/10000

●Brightness [Works when AE MODE is BRIGHT]

Adjusts brightness of images. Iris, Shutter Speed and Gain are adjusted automatically in correspondence with this value. Range: 0~31 (32 steps)

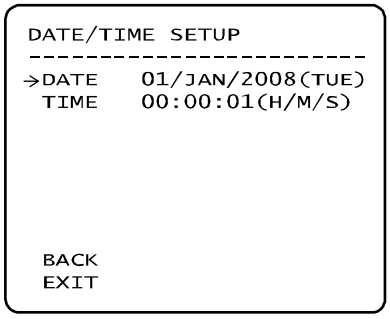
System Setup



- SYSTEM SETUP — You can set up Date/Time, ALARM OUTPUT RELAY, PASSWORD, HOME POSITION, NORTH POSITION.

- DATE — Date is displayed in dd/mmm/yyyy format. The day is automatically calculated when you set the date.

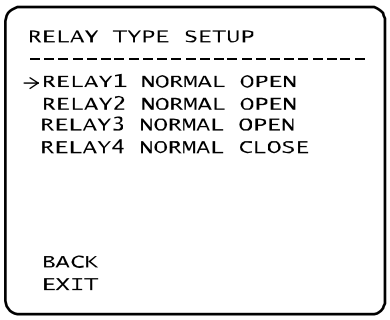
- TIME — Time is displayed in HH:MM:SS format.



- DATE/TIME Setup — After you press the Near key, each field can be selected by Left/Right keys and the values in the field are changed using Up/Down keys. To save the updated data, press the Near key again

- TIME — Time is displayed in HH:MM:SS format.

- DATE/TIME Setup — After you press the Near key, each field can be selected by Left/Right keys and the values in the field are changed using Up/Down keys. To save the updated data, press the Near key again

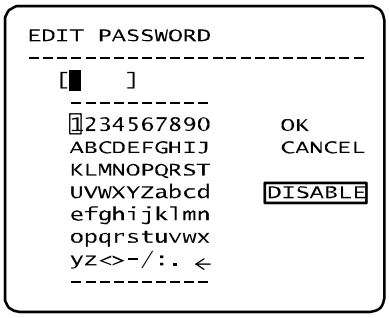


↗ It is noted that the range of date setup is limited from 01/JAN/2000 to 31/DEC/2037.

- RELAY TYPE SETUP — Contact types of 4 Ch. RELAY OUTPUTS are defined. (NORMAL OPEN / NORMAL CLOSE)

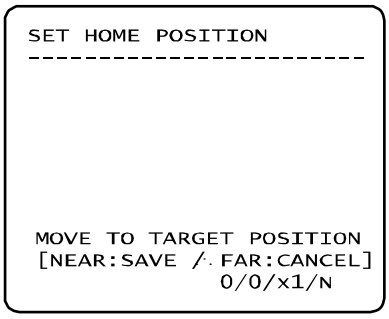
  NORMAL OPEN

  NORMAL CLOSE



- PASSWORD SETUP — You can define 4 characters long password. If this function is set to ENABLE, it is required to type this password whenever to enter OSD MENU.

  It is noted that MASTER PSSWORD : "4321"



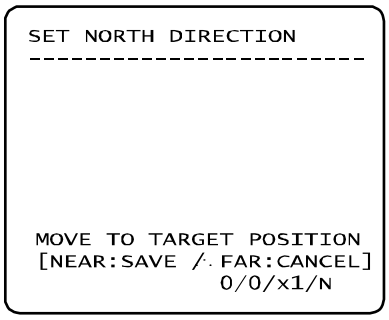
● SET HOME POSITION

HOME position means the origin of PAN angle calculation. The value of PAN angle displayed on the screen is based on this HOME position.

By using Joystick, move the camera to the desired position and press ENTER (NEAR/SAVE).

It is noted that Home is not effective to Tilt angle.

If you change the location of Home position, all horizontal locations of functions such as preset, pattern, Group, Scan, and privacy zone mask will be shifted based on changed Home position.



● SET NORTH DIRECTION

You can set up North direction.

By using Joystick, move the camera to the desired NORTH position and press ENTER (NEAR/SAVE).

The direction will be displayed in the screen

[PAN AXIS / TILT AXIS / ZOOM / DD]

DD is direction and will be displayed from:

N/NE/E/SE/S/SW/W/NW

● LANGUAGE

You can select a preferred Language of OSD display from 7 choices.

[ENGLISH/ESPAÑOL/FRANÇAIS/DEUTSCH/ITALIANO /РУССКИЙ/PORTUGUÊS]

After selecting a language, press Enter(NEAR) key.

TIP: Set Home Position

When you replace the camera block or the orientation of camera is changed due to maintenance operations, it is very difficult to maintain same pan orientation. Therefore, all function data depending on pan orientation such as preset, pattern, Group, Scan, and privacy zone mask are not useful any more accordingly. However, even in this case, you can reuse the data if you redefine **Set Home Position** on the previous Home position. It is recommendable to memorize the target scene of current Home position.

System Initialize

```
SYSTEM INITIALIZE
-----------------------
→CLEAR ALL DATA      NO
 ■CLR DISPLAY SET    NO
 ■CLR CAMERA SET     NO
 ■CLR MOTION SET     NO
 ■CLR FUNCTION SET   NO
  REBOOT CAMERA      NO
  REBOOT SYSTEM      NO

  BACK
  EXIT
```

- ● Clear All Data — Deletes all configuration data such as display, camera, motion setup, and so on.
- ● Clear Display Set — Initializes Display Configuration
- ● Clear Camera Set — Initializes Camera Configuration
- ● Clear Motion Set — Initializes Motion Configuration
- ● Clear Function Se — Deletes Preset Data, Scan Data, Pattern Data, Group Data and Schedule Data
- ● Reboot Camera — Reboots Zoom Camera module
- ● Reboot System — Reboots Speed Dome Camera

❑ Initial Configuration Table

● Display Configuration	
Camera ID	ON
PTZ Information	AUTO
Action Title	AUTO
Preset Label	AUTO
Alarm I/O	AUTO
Date/Time	ON
Privacy Zone	Undefined
North Direction	Pan 0°

● Motion Configuration	
Preset Lock	OFF
Power Up Action	ON
Auto Flip	ON
Jog Max Speed	140°/sec
Jog Direction	NORMAL
Freeze In Preset	OFF
Park Action	OFF
Alarm I/O Action	OFF

● Communication Setup	
Protocol	AUTO
Baud Rate	2400

● Camera Configuration	
Focus Mode	SEMIAUTO
Digital Zoom	ON
Image Flip	ON
White Balance	AUTO
Backlight/BLC	ALL OFF
Day/Night	AUTO
AE Mode	AUTO
Iris Level	AUTO
Shutter	ESC
AGC	NORMAL
DNR	MIDDLE
SENS-UP	AUTO

● Function Data	
Preset 1~128	Undefined
Scan 1~8	Undefined
Pattern 1~4	Undefined
Group 1~8	Undefined
Schedule 1~7	Undefined

Quick Start of Network Connection

Please follow the steps below to complete the initial setup of the Network Function.

- ⓘ Please do not power on the IP Speed Dome until instructed.
- ⓘ Temporarily disable any proxy servers configured in Internet Explorer.
- ⓘ If connecting the IP Speed Dome directly to a modem, power down and reset the modem. Leave the modem powered down until configurations are finalized with the IP Speed Dome and the IP Speed Dome has been correctly connected to the modem.

① You will need to access a PC/laptop and should configure that PC in order to communicate with the IP Speed Dome. Record the current TCP/IP properties of that PC (IP address, subnet mask, gateway, DNS, etc)

- ⓘ If your PC obtains its IP address automatically, then there is no need to record any information.

② Change the IP address of that host PC to 192.168.1.11 and subnet mask to 255.255.255.0 (leave all other entries blank)

③ Connect the IP Speed Dome to your PC's Ethernet port via the supplied crossover cable (it does not matter what end is used for the PC)

④ Power on the IP Speed Dome using the supplied power adapter.

⑤ After 50 seconds of power, verify a flashing ACTIVE indicator, and a flashing or solid LINK indicator. After the corresponding indicator lights are properly displayed, open Internet Explorer.

⑥ Type - http://192.168.1.80 (the default IP of the IP Speed Dome) into your address bar.

⑦ Default ID/Password to access IP Speed Dome are both the word: admin

⑧ Familiarize yourself with the Viewer Interface Screen.

⑨ Locate the TCP/IP configuration under Administration Tools. Supply the same ID and Password to enter Administration Tools (admin:admin)

⑩ Under "Network Type" select STATIC. You will only select Dynamic or PPPoE if you are connecting the IP Speed Dome directly to your cable/DSL/Broadband modem and your Internet Service Provider is supplying you a dynamic or PPPoE address.

- ⓘ If you have a network with other devices (such as PC/laptop, etc.) or a router, you will NEVER select Dynamic or PPPoE.

⑪ Configure the IP Speed Dome's TCP/IP settings as you would any other PC on your network, providing a proper IP address, subnet mask, default gateway, and DNS server.

ⓘ If this is standalone unit with a direct connection to a cable/DSL/Broadband modem then input the addresses you have received from your ISP. If you received no IP address from your ISP, please select Dynamic or PPPoE and choose the proper settings.

⑫ The IP Speed Dome utilizes five TCP ports - a Web Server Port for utilizing Internet Explorer, a Video Server Port, a Control Server Port, Audio ports. A Web Server Port is for utilizing Internet Explorer, a Video Server port is to support the streaming video, and a Control Server Port is to transmit to control command. Also Audio Port are to transmit and to receive Audio data. If this IP Speed Dome will be directly attached to a cable/DSL/Broadband modem or has been assigned a static IP from your ISP, then leave the default port settings. If you are installing the IP Speed Dome on a network, you must define a Web Server Port other than 80. The other ports, a Video Server Port, a Control server Port, Audio Ports can remain unchanged.

⑬ If the IP Speed Dome is connected to a network which utilizes a router, you must have Port Forwarding configured on your personal router to forward all ports to the IP address you have assigned the IP Speed Dome.

⑭ After configuring Port Forwarding on your router (if necessary), you may then access your IP Speed Dome on your local network by opening Internet Explorer and specifying the IP address and Web Server Port that you have assigned to the IP Speed Dome.

ⓘ Examples: http://192.168.0.200:8888 or http://24.106.88.123

ⓘ If you left your Web Server Port set to 80, then you don't need to specify the port in the Address Bar when accessing your IP Speed Dome.

⑮ Access your IP Speed Dome via the Internet :

- ❑ If you used a static IP address assigned by your ISP
  - i) Open Internet Explorer.
  - ii) Type the IP of the IP Speed Dome.
  - iii) If you use a router, type the routers' static IP and the web port number of the IP Speed Dome.
- ❑ If you have a dynamic address provided by your ISP
  - i) Open Internet Explorer and visit the DDNS website.
  - ii) Register the IP Speed Dome.
  - iii) Reboot the IP Speed Dome.
  - iv) Give the DDNS server 2 minutes to locate your IP Speed Dome's IP information.
  - v) Click the refresh button in the Internet Explore.
  - vi) After your camera is connected, select your camera.

Initial Setup via a Crossover Cable

This section provides a guide on how to connect the IP Speed Dome to your PC/laptop for initial setup.

Please follow the instructions in the order they appear, without skipping steps. Do not supply power to the IP Speed Dome, until instructed.

In order to access the IP Speed Dome's firmware you will need to connect the Video Server directly to a PC or laptop computer via the supplied crossover cable.

① Before you begin, you must determine the current network/INTERNET (TCP/IP) settings on the PC or laptop you plan to setup the IP Speed Dome. Jot down your entries below for quick reference.

ⓘ For information on how to determine your currents settings, see Appendix A

Current TCP/IP Settings	
IP Address	
Subnet Mask	
Default Gateway	
Primary DNS Server	
Secondary DNS Server (Option)	

② In order for the IP Speed Dome to communicate with your PC, you have to change your PC's IP address and subnet mask

ⓘ We recommend that you change your IP address to 192.168.1.11 and change the subnet mask to 255.255.255.0
Leave all other entries (Default Gateway, DNS Servers, etc.) blank.

ⓘ For information on how to change your IP address and subnet mask, see Appendix B

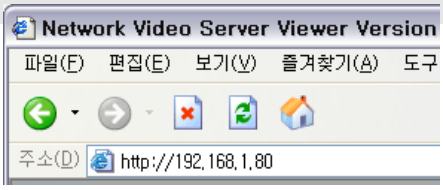
③ After you have made the changes to your IP address and subnet mask, you may then attach the IP Speed Dome to your PC via the supplied crossover cable. Plug-in either end of the crossover cable into the PC's network card and the other end into your IP Speed Dome.

④ After connecting the PC and IP Speed Dome using the crossover cable, power on the IP Speed Dome by plugging in the power supply shipped with the IP Speed Dome.

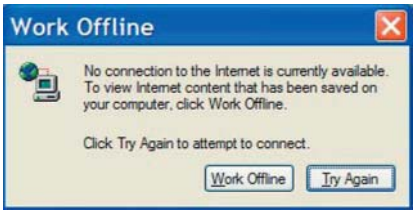
⑤ No longer than 1 minute after powering on the IP Speed Dome, verify that the ACTIVE indicator light is flashing, and the LINK indicator light is flickering or solid. If they are not, please read the FAQ.

⑥ Now you will be able to access the viewer software within the IP Speed Dome.

ⓘ Open Internet Explorer and type the IP address of 192.168.1.80 (default IP of the IP Speed Dome from the factory) into the Address Bar of the web browser (as seen below). Press Enter.



ⓘ If a message appears after pressing "Enter" similar to the image depicted below, choose "Try Again". This message will vary depending on the operating system.


Work Offline
No connection to the Internet is currently available. To view Internet content that has been saved on your computer, click Work Offline.
Click Try Again to attempt to connect.
Work Offline
Try Again

⑦ Now you will be able to see the login screen for the IP Speed Dome

ⓘ The 3 authorities are available : Administrator, Operator and Viewer. The authority setup is available in Admin. Tools.

- Viewer — Only monitoring is allowed.
- Operator — Monitoring, PTZ Control and Digital In/Out Control are allowed.
- Administrator — All functions are allowed.

⑧ The default ID and Password are both the word "admin" (without the "")

⑨ If at any time you are prompted to download ActiveX controls, you must click 'Yes', all content is safe.

ⓘ You will have to click "Yes" twice to two individual prompts. This allows your video to be displayed in Internet Explorer.

Guide to Network Setup

Please configure the IP Speed Dome at the location of its installation. You must determine your network scenario in order to configure the IP Speed Dome with the proper TCP/IP settings. This tutorial will guide you through the process. Before actually configuring the IP Speed Dome, determine what settings you will apply. Record those settings that you will use to configure your IP Speed Dome for reference.

When configuring your IP Speed Dome, treat the IP Speed Dome as another PC on your network. You will assign it several addresses and other TCP/IP properties to match your current network.

This step-by-step tutorial will teach what IP addresses and network configurations you should assign your IP Speed Dome based upon your network scenario.

① Before you begin, you will need to locate any information and settings that you have received from your Internet Service Provider (ISP). You may need to refer to these IP addresses at a later time during the configuration.

ⓘ If you were not given any IP addresses or the ISP was responsible for the setup and installation of your Internet connection on your PC or network, then please go to step ②

ⓘ If you are not using a router on your network, your "Current TCP/IP Settings" (from the previous section) and "Assigned IP Addresses from My ISP" will be exactly the same

Assigned IP Address	
IP Address	
Subnet Mask	
Default Gateway	
Primary DNS Server	
Secondary DNS Server (Option)	

Static ☐
Dynamic ☐
PPPoE ☐

② You must determine whether the IP address that you were assigned from the ISP is STATIC, DYNAMIC, or using PPPoE. At this moment, you are only concerned about the ISP. Did they provide you with a STATIC, DYNAMIC, or PPPoE address? If you are unsure, please contact your ISP.

③ Configure your IP Speed Dome's TCP/IP settings for network connectivity by selecting Administration Tools from the main interface and selecting TCP/IP located on the left of the Administration Tools screen.

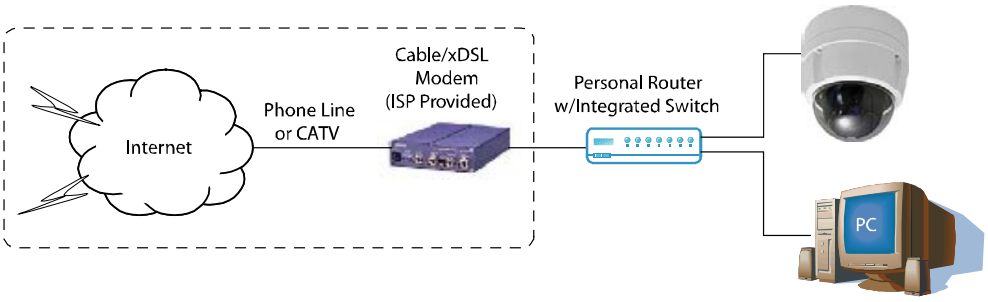
④ If prompted for an ID and Password, use "admin" for both entries.

The default web port number is 80. If your ISP blocks port 80 you must use a value between 1025-30000. Please consult your ISP and determine if they block TCP port 80.

⑤ Depicted below are several basic network scenarios. Determine which scenario describes your network. If your network does not match one of the scenarios below and are unsure how to setup your IP Speed Dome, please contact your network administrator, then call our Support Center.

ⓘ Dash line box signifies areas of tour network that you can't control. Only the ISP has access to these devices.

Case A : Dynamic IP or PPPoE + Personal Router [Most SOHO]



Configure your IP Speed Dome's TCP/IP properties as follows :

❑ Network Type

• STATIC (even though you have Dynamic IP from your ISP, use STATIC on the IP Speed Dome)

❑ Internet Address

• A private IP address such as 192.168.0.200 [Example]

ⓘ You need to assign the IP Speed Dome an IP address, just as you would assign a PC.

ⓘ The IP address you assign must be unique to your network as well as match your network. For information how to choose a unique IP and match your network please read the FAQ.

ⓘ The IP address you assign the IP Speed Dome must be a private IP. For information on how to chose a private IP please read the FAQ

❑ Subnet Mask

• 255.255.255.0 [Example]

ⓘ You must use the same subnet mask as the one you noted under "Current TCP/IP Settings"

❑ Default Gateway

• 192.168.0.1 [Example]

ⓘ This IP address must be the IP address of your router (private or LAN side)

ⓘ Use the same Default Gateway you noted under "Current TCP/IP Settings"

❑ Primary DNS Server

• Use the 1st DNS Server from "Assigned IP Address from My ISP"

ⓘ If you did not receive any IP addresses from your ISP, please contact them and acquire the IP address of their DNS server.

❑ DDNS Server

• Use the DDNS server

ⓘ This is the same site you will register with later to accommodate dynamic IP from your ISP.

❑ Web Server Port

• 8888

ⓘ Do NOT use the default port 80, you must change this number.

ⓘ You may select any number between 1025 ~ 30000.

❑ Control Server Port

• 7777

ⓘ You may select any number between 1025 ~ 30000.

❑ Video Server Port

• 7778

ⓘ You may select any number between 1025 ~ 30000.

❑ Audio Transmit Server Port

• 7779

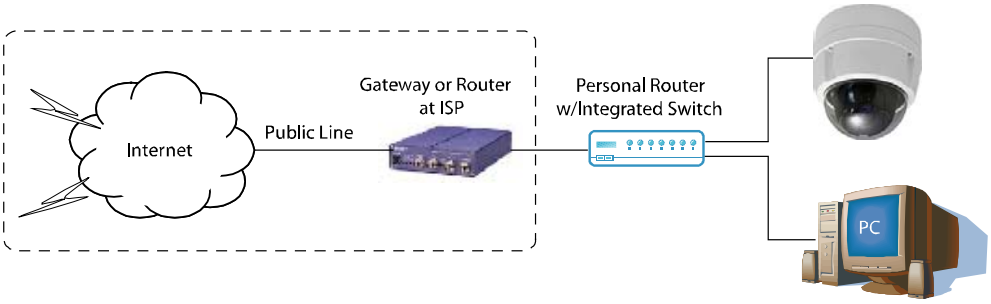
ⓘ You may select any number between 1025 ~ 30000.

❑ Audio Receive Server Port

• 7780

ⓘ You may select any number between 1025 ~ 30000.

Case B : Static(Fixed) IP + Personal Router [Efficient]



Configure your IP Speed Dome's TCP/IP properties as follows :

❑ Network Type
- STATIC

❑ Internet Address
- A private IP address such as 192.168.0.200 [Example]

ⓘ You need to assign the IP Speed Dome an IP address, just as you would assign a PC.

ⓘ The IP address you assign must be unique to your network as well as match your network. For information how to choose a unique IP and match your network please read the FAQ.

ⓘ The IP address you assign the IP Speed Dome must be a private IP. For information on how to chose a private IP please read the FAQ

❑ Subnet Mask
- 255.255.255.0 [Example]

ⓘ You must use the same subnet mask as the one you noted under "Current TCP/IP Settings"

❑ Default Gateway
- 192.168.0.1 [Example]

ⓘ This IP address must be the IP address of your router (private or LAN side)

ⓘ Use the same Default Gateway you noted under "Current TCP/IP Settings"

❑ Primary DNS Server
- Use the 1st DNS Server from "Assigned IP Address from My ISP"

ⓘ If you did not receive any IP addresses from your ISP, please contact them and acquire the IP address of their DNS server.

❑ DDNS Server
- Use the DDNS server

ⓘ This is the same site you will register with later to accommodate dynamic IP from your ISP.

❑ Web Server Port • 8888

ⓘ Do NOT use the default port 80, you must change this number.

ⓘ You may select any number between 1025 ~ 30000.

❑ Control Server Port • 7777

ⓘ You may select any number between 1025 ~ 30000.

❑ Video Server Port • 7778

ⓘ You may select any number between 1025 ~ 30000.

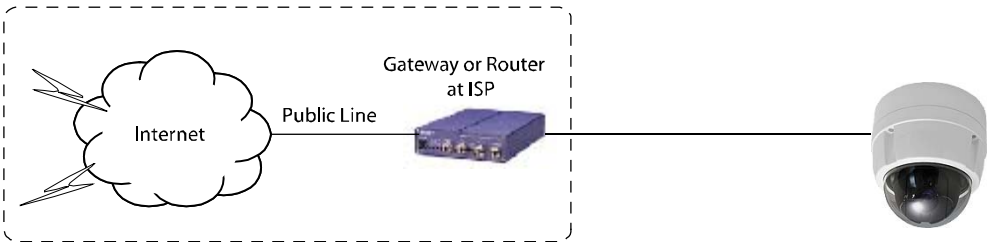
❑ Audio Transmit Server Port • 7779

ⓘ You may select any number between 1025 ~ 30000.

❑ Audio Receive Server Port • 7780

ⓘ You may select any number between 1025 ~ 30000.

Case C : Static(Fixed) IP [Dedicated line directly to the IP Speed Dome]



Configure your IP Speed Dome's TCP/IP properties as follows :

❑ Network Type
- STATIC

❑ Internet Address
- A static IP address received from your ISP, such as 24.107.88.125 [Example]

ⓘ You need to assign the IP Speed Dome an IP address, just as you would assign a PC.

❑ Subnet Mask
- Subnet mask assigned from your ISP, such as 255.255.255.240 [Example]

❑ Default Gateway
- 24.107.88.113 [Example]

ⓘ Use the assigned default gateway from your ISP

❑ Primary DNS Server
- Use the 1st DNS Server from "Assigned IP Addresses from My ISP"

ⓘ If you did not receive any IP addresses from your ISP, please contact them and acquire the IP address of their DNS server.

❑ DDNS Server
- Use the DDNS sever

ⓘ This is the same site you will register with later to utilize our DDNS service.

❑ Web Server Port
- 80 [default]

ⓘ You may select any number between 1025 ~ 30000.

❑ Control Server Port
- 7777

ⓘ You may select any number between 1025 ~ 30000.

❑ Video Server Port • 7778

ⓘ You may select any number between 1025 ~ 30000.

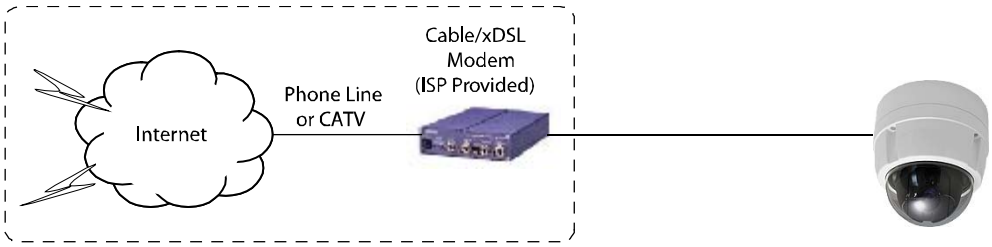
❑ Audio Transmit Server Port • 7779

ⓘ You may select any number between 1025 ~ 30000.

❑ Audio Receive Server Port • 7780

ⓘ You may select any number between 1025 ~ 30000.

Case D : Dynamic IP + DSL/Cable Modem [Connected directly to the IP Speed Dome]

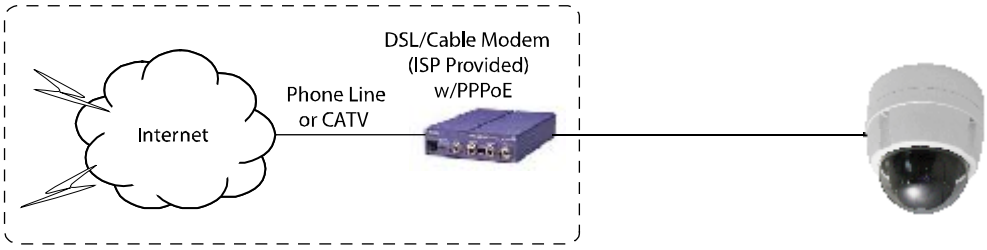


Configure your IP Speed Dome's TCP/IP properties as follows :

- ❑ Network Type
  - DYNAMIC
- ❑ DDNS Server
  - Use the DDNS server
  - ⓘ This is the same site you will register with later to accommodate dynamic IP from your ISP.
- ❑ Web Server Port
  - 80 [default]
  - ⓘ You may select any number between 1025 ~ 30000.
- ❑ Control Server Port
  - 7777
  - ⓘ You may select any number between 1025 ~ 30000.
- ❑ Video Server Port
  - 7778
  - ⓘ You may select any number between 1025 ~ 30000.
- ❑ Audio Transmit Server Port
  - 7779
  - ⓘ You may select any number between 1025 ~ 30000.
- ❑ Audio Receive Server Port
  - 7780
  - ⓘ You may select any number between 1025 ~ 30000.

ⓘ When connecting the IP Speed Dome directly to a modem, power down and reset the modem. Leave the modem powered down until configurations are finalized with the IP Speed Dome and the IP Speed Dome has been correctly connected to the modem. Then power on the modem, followed by the IP Speed Dome.

Case E : PPPoE + DSL Modem [Connected directly to the IP Speed Dome]



Configure your IP Speed Dome's TCP/IP properties as follows :

❑ Network Type
- PPPoE

❑ User ID
- Use the User ID or Username you received from your ISP for this direct connection

❑ User Password
- Use the Password you received from your ISP for this direct connection

❑ DDNS Server
- Use the DDNS server

ⓘ This is the same site you will register with later to utilize our DDNS service

❑ Web Server Port
- 80 [default]

ⓘ You may select any number between 1025 ~ 30000.

❑ Control Server Port
- 7777

ⓘ You may select any number between 1025 ~ 30000.

❑ Video Server Port
- 7778

ⓘ You may select any number between 1025 ~ 30000.

❑ Audio Transmit Server Port
- 7779

ⓘ You may select any number between 1025 ~ 30000.

❑ Audio Receive Server Port
- 7780

ⓘ You may select any number between 1025 ~ 30000.

Port Forwarding

After entering the correct TCP/IP settings you will be ready for "Port Forwarding" (Cases A, B).

- Please record the TCP/IP settings of your IP Speed Dome for future reference. You may need this information to access your IP Speed Dome and to configure "Port Forwarding".

IP Speed Dome TCP/IP Settings	
IP Address	
Subnet Mask	
Default Gateway	
Primary DNS Server	
DDNS Server	
Web Server Port	
Control Server Port	
Video Server Port	
Audio Transmit Server Port	
Audio Receive Server Port	

- **After clicking "Apply" the system will prompt for a reboot. Please allow the system 50 seconds to reboot and accept the changes. After 50 seconds, close the configuration screen. The view will display "Trying to Reconnect". If the ACTIVE light on the IP Speed Dome has gone off and is now back on again flashing, then the IP Speed Dome has rebooted. After the system reboots completely, remove the power supply from the unit and close Internet Explorer.**
- Return your PC/Laptop TCP/IP properties to their original settings.
- Before installing the IP Speed Dome, you must use "Port Forwarding" on your personal router (Cases A, B).
  You will need to forward 5 ports:

  - Web Server Port you assigned to the IP Speed Dome.
  - Control Server Port you assigned to the IP Speed Dome.
  - Video Server Port you assigned to the IP Speed Dome.
  - Audio Transmit Server Port you assigned to the IP Speed Dome.
  - Audio Receive Server Port you assigned to the IP Speed Dome.

  Both of these ports will be forwarded to the IP address you assigned to the IP Speed Dome.
  In the example above, you would forward:

  - 8888 → 192.168.0.200
  - 7777 → 192.168.0.200
  - 7778 → 192.168.0.200
  - 7779 → 192.168.0.200
  - 7780 → 192.168.0.200

ⓘ For information on how to use "Port Forwarding" please read Appendix C

Starting IP Speed Dome

After correctly forwarding the Web Server Port , Video Server Port, Control Server Port and two Audio Ports through your router (if applicable), you may then install the IP Speed Dome in a proper location.

① Locate the serial number located on the label attached to the bottom of the IP Speed Dome, you will need this for DDNS registration.

② Connect the IP Speed Dome to your router or cable/DSL modem (per your network scenario) via a Cat5/5e UTP Ethernet network cable.

③ Supply power to the IP Speed Dome.

④ After 50 seconds, verify the IP Speed Dome indicators:

- ACTIVE Flashing
- LINK Flickering/Solid

⑤ After configuring Port Forwarding on your router (if necessary), you may then access your IP Speed Dome on your local network by opening Internet Explorer and specifying the IP address and Web Server Port that you have assigned to the IP Speed Dome.

ⓘ Examples: http://192.168.0.200:8888 or http://24.106.88.123

ⓘ if you left your Web Server Port set to 80, then you don't need to specify the port in the Address Bar when accessing the IP Speed Dome.

⑥ Access your IP Speed Dome via the Internet:

❑ If you use Case B or C

i) Open Internet Explorer.

ii) Type the IP of the IP Speed Dome.

❑ If you use Case A, D, E

i) Open Internet Explorer.

ii) Visit the DDNS website.

iii) Register the IP Speed Dome.

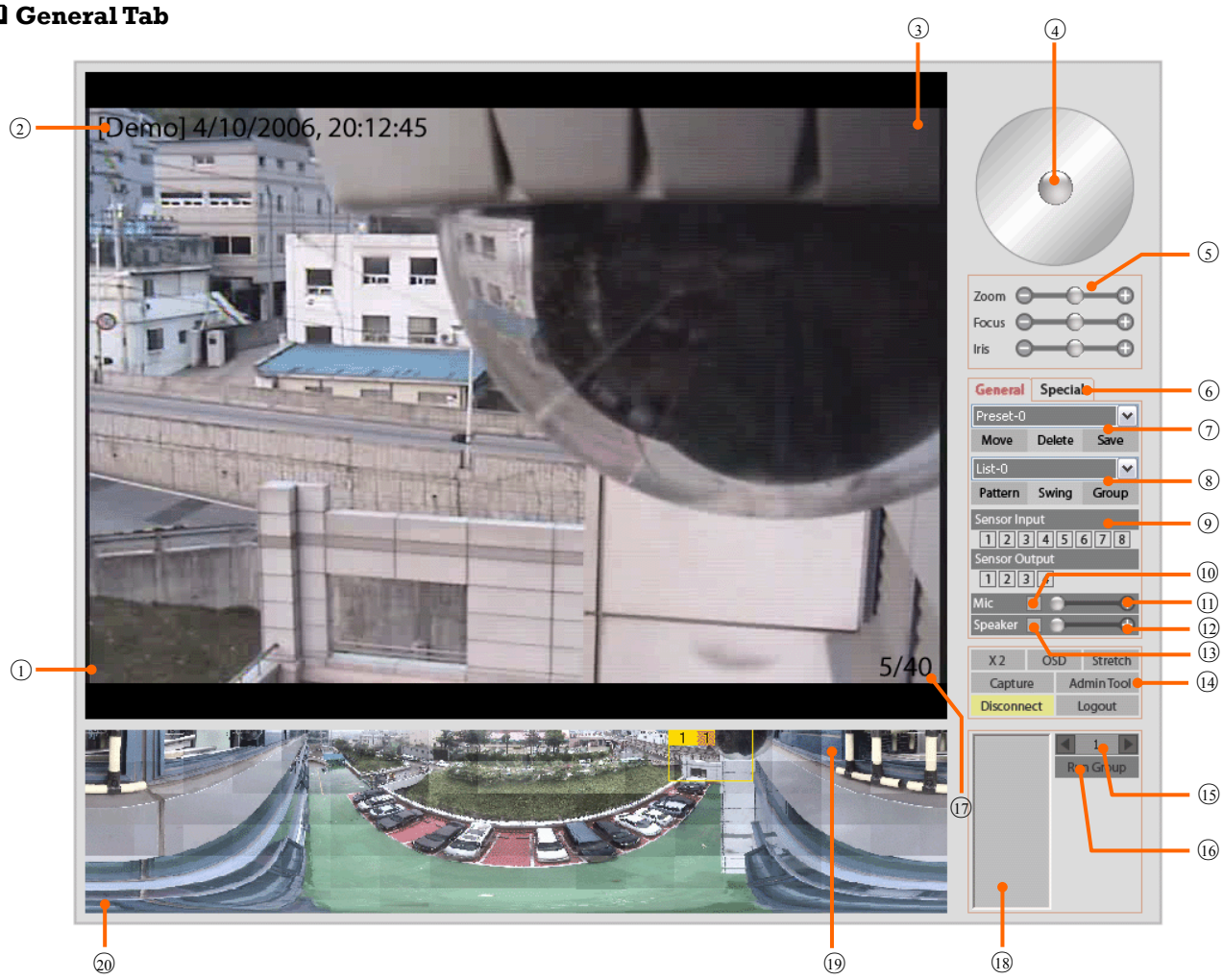
iv) Give the DDNS server 10 minutes (MAX) to locate your IP Speed Dome's IP information. You may reboot the server to send an immediate request to our DDNS server.

v) After your camera is connected, select your camera.

Web Viewer Screen

In this section, the main GUI of the IP Speed Dome will be explained.

❑ General Tab



① Live video Display

② OSD - Camera Name / Date / Time

③ OSD – In this location, level of user logged will be displayed. For example, 'G' means guest level of user.

- G = Guest User : Video monitoring only

④ Virtual Joystick Handle for Pan/Tilt control. If you press and drag the handle in the center of circle, the camera will be moved in accordance with your mouse movement. If you release the mouse button, camera will be stopped and the handle will be relocated to the center of the circle. It is noted that the speed will be proportional to the displacement of handle from the center.

⑤ Zoom, Focus, and Iris controls for the camera connected to IP Speed Dome. If you drag the each handle, Zoom, Focus, and Iris are adjusted individually according to your mouse motion.

⑥ Tap to switch General or Special function controls. The picture above shows controls when general controls are selected. If you select special tab, you will have more controls such as Map Create, Motion Detection, and Motion Tracking.

⑦ Controls for Presets memorized in the PTZ camera. It is noted that some PTZ devices may not support all of these functions and the Preset and Group functions created in the Map(⑮,⑲) are supported by IP Speed Dome.

⑧ Controls for Pattern, Swing and Group functions memorized in the PTZ camera. It is noted that some PTZ devices may not support all of these functions and the Preset and Group functions created in the Map is supported by IP Speed Dome.

⑨ Sensor Alarm Input status and Sensor Alarm Output control.

⑩ This button allows transmitting Audio stream from your MIC to IP Speed Dome.

⑪ Volume control for MIC in your computer.

⑫ Volume control for speaker out of your computer.

⑬ This button allows receiving Audio stream from IP Speed Dome.

⑭ Controls in this area has many functions such as;

X2 :	2 times Digital Zoom.
OSD :	It means "On Screen Display". Click this button to display the captions.
Stretch :	Stretch will fit the video size to the viewer window regardless of resolution.
Capture :	Click this button to save video as an image.
Admin Tool :	Click this button to enter Administration Tools.
Connect/Disconnect :	Click this button to disconnect or connect from the server.
Logout :	Click this button to logout.

⑮ show the Current Group number. The maximum number of group is 20.

⑯ Click to run current group (shown in ⑮).

⑰ Display current number of users connected as:
[Current number of users connected / maximum number of users connected].

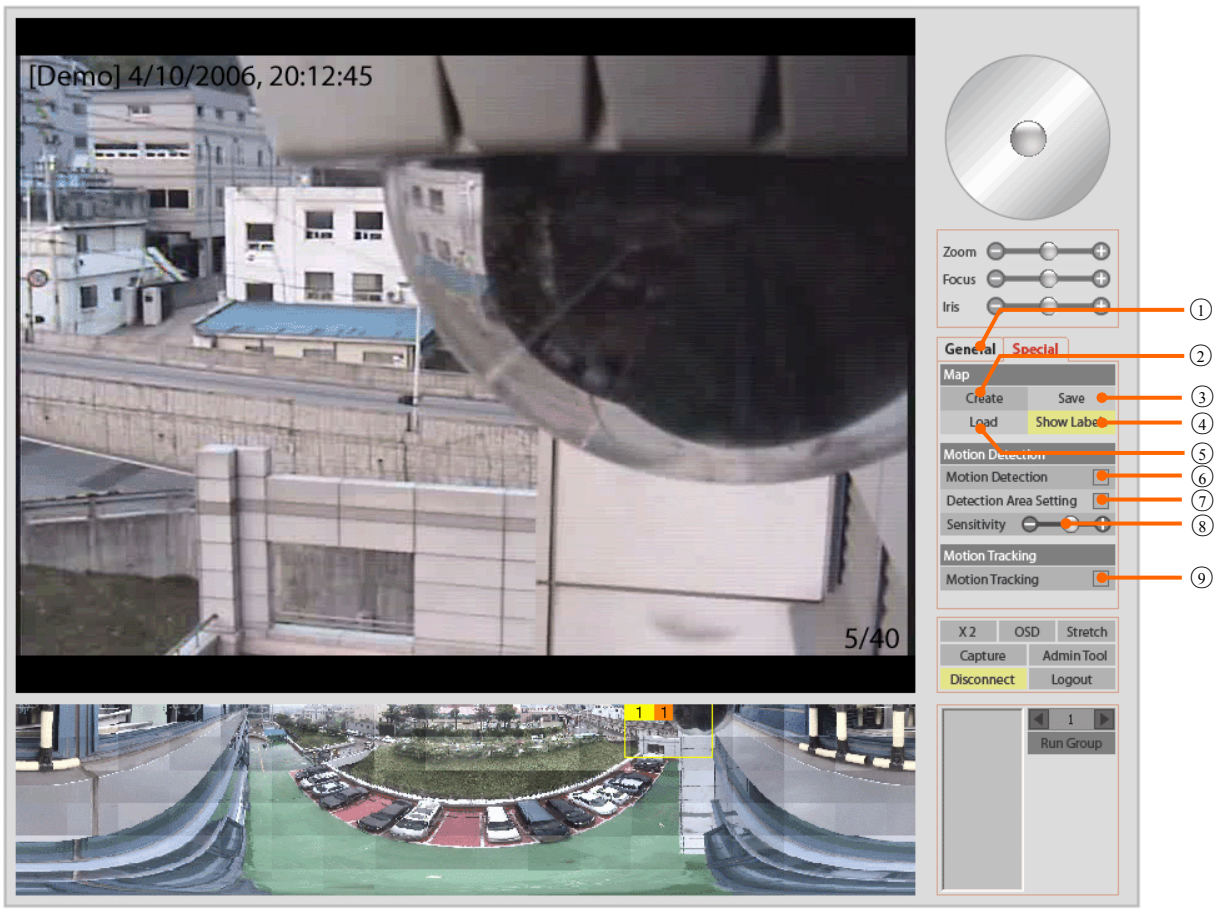
⑱ Show the list of presets selected in the group in ⑮.

⑲ Show the information of the preset stored before. The number in the yellow box is the preset number and the number in the orange box means Dwell time. It is noted that the box size means view size of corresponding preset. Accordingly, the smaller box size, the bigger zoom magnification.

⑳ This Screen is called map. This map data is normally stored in IP Speed Dome to share it with all clients. By pressing appropriate button, you may download it from IP Speed Dome or create to update it.

As explained before, there are three kinds of user authority level i.e. guest, operator and administrator and. It is noted that since the OSD display and Digital Zoom functions do not affect other users view but only affect the current view, these functions can be changed to all user levels. However, since all other functions affect to settings of the video server and accordingly video of all users connected, the user with administrator level can change those functions.

❑ Special Tab



① Tab to switch General controls.

② Click it to create new map automatically. Before creating new map, please, make sure Camera model in the "Motion Tracking" menu and PTZ Protocol in "Control" menu in the Admin Tool is correctly selected.

③ Click it to store map, presets and group data to the IP Speed Dome.

④ Click it to show or hide the preset box and label on the map.

⑤ Click it to download the map from IP Speed Dome.

⑥ This button activates or stops motion detection. "Detection Area setting" bellow must be done in advance.

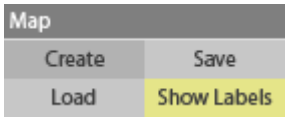
⑦ This button activates or stops motion detection target area setup mode. If you click this button, you will see the green grids on the screen. To assign the target area, click the corresponding square on there screen. The color of the square will be changed. To clear the selection, click again the square.
If you want to exit the setup mode, press this button again.

⑧ This defines the sensitivity of motion detection. Move small circular handle toward the+ direction to increase the sensitivity.

⑨ Click it to turn Motion Tracking function on or off.

Create, Save, Load Map

Firstly, make sure Camera Model in "Motion Tracking" menu and PTZ Protocol in "Control" menu of Administration Tools before creating Map. Also, most map related function except "Load" can be operated only by the user who has Administrator authority.



❑ Create Map

Click [Create] button to make IP Speed Dome create new map automatically. If you control something else when map is created, that will disturb creating work. In this case, accordingly, you will have inaccurate map.

❑ Save Map

If you click [Save] button, the current Map, Preset and Group data will be uploaded to the IP Speed Dome. By this, you can use stored map data in the future and share it with other Clients.

❑ Load Map

If you click [Load] button, the Map, Preset and Group data stored previously will be downloaded from the IP Speed Dome.

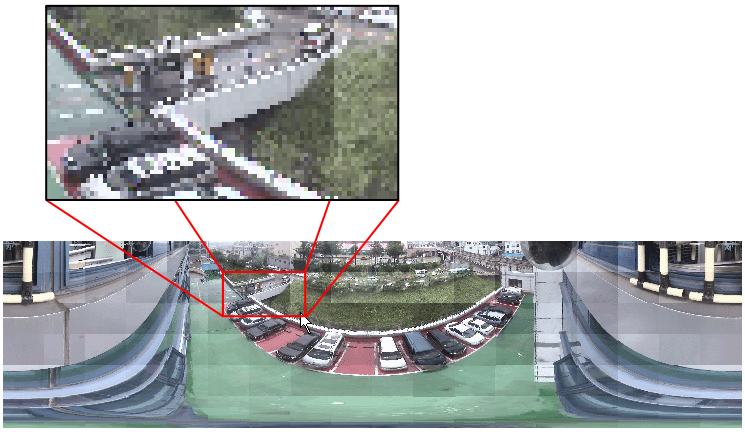
If there is no map data stored in the IP Speed Dome, you will see only black map in the screen.

❑ Show Labels

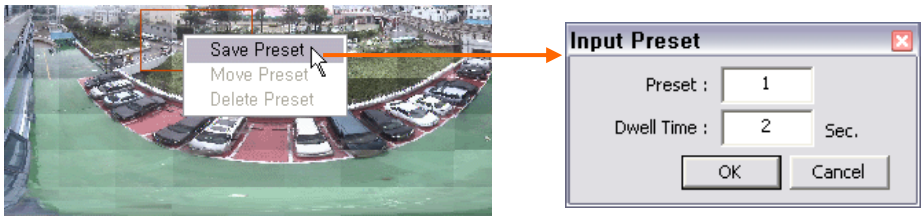
Show or hide the preset box and label on the map.

Preset

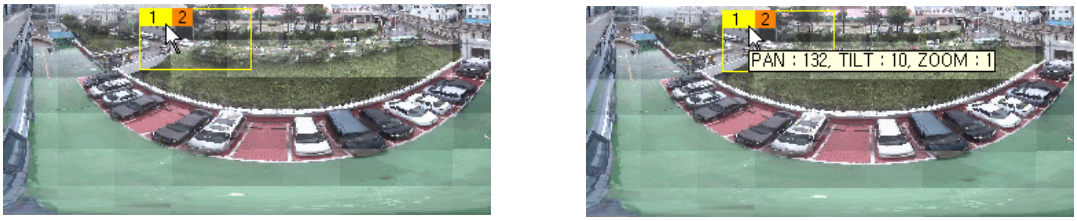
If you draw a box on the map as shown in the picture bellow, the PTZ camera will move and change the zoom ratio to obtain the optimal video matched with the box you just draw.



As shown bellow, if you click the right button of a mouse, you will see the menu item [Save Preset]. If you choose this, you will see a dialog box to specify Preset Number and Dwell Time. Dwell time means how long the camera will stay at corresponding Preset position while performing Group function. Dwell time can be a value 0 to 60 seconds.



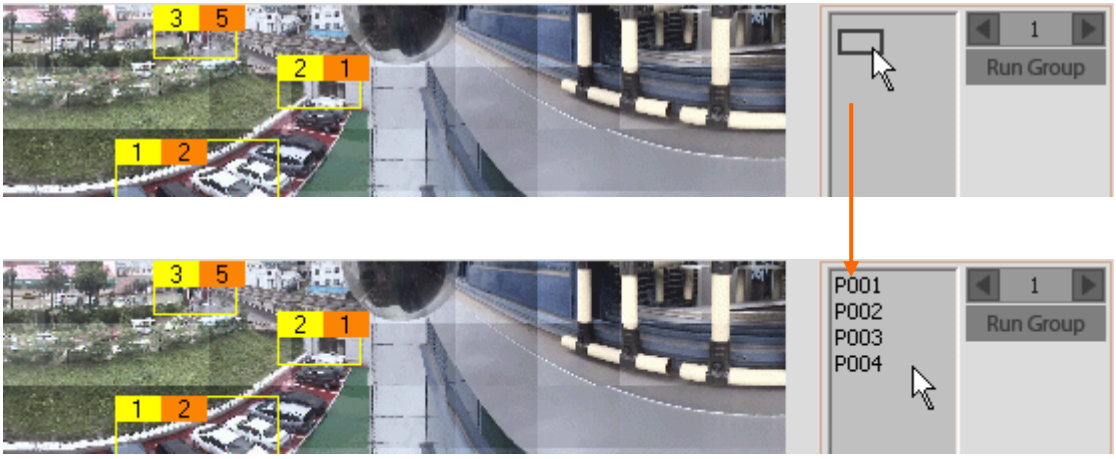
If you define a preset, size of view, location, number and dwell time of Preset is denoted on the map as shown in the pictures bellow. Moreover, the detail information of each Preset i.e. Pan / Tilt angle and zoom ratio will be displayed if the mouse approaches to yellow box.



If you click the preset number on yellow box or [Move Preset] menu shown with right click. Camera will move to corresponding preset view.

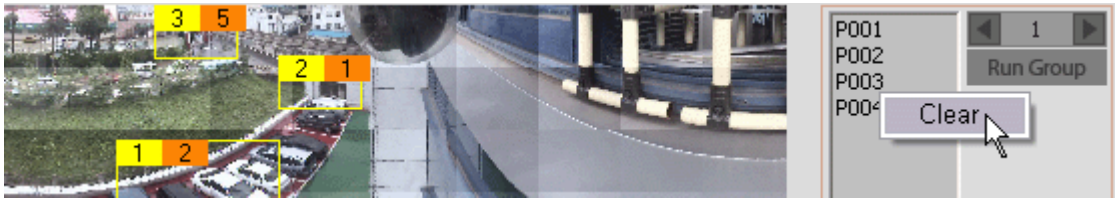
Group

If you drag a preset number in the yellow box on the map and drop it into the group list box as shown in the picture bellow, corresponding Preset number will be added and registered like "P000" as a member of Group. Maximum 20 presets can be member of one Group. Maximum 20 groups can be register in an IP Speed Dome.



If you Click [Run Group], camera will move from a preset to other preset listed bellow repeatedly. If it arrive the last one, it will start from the beginning. It is noted that the interval will be determined by dwell time in the orange box and real moving time. To stop group operation, click [Run Group] button again.

To delete a group, select [Clear] menu showing if you click the right button on the Group list.

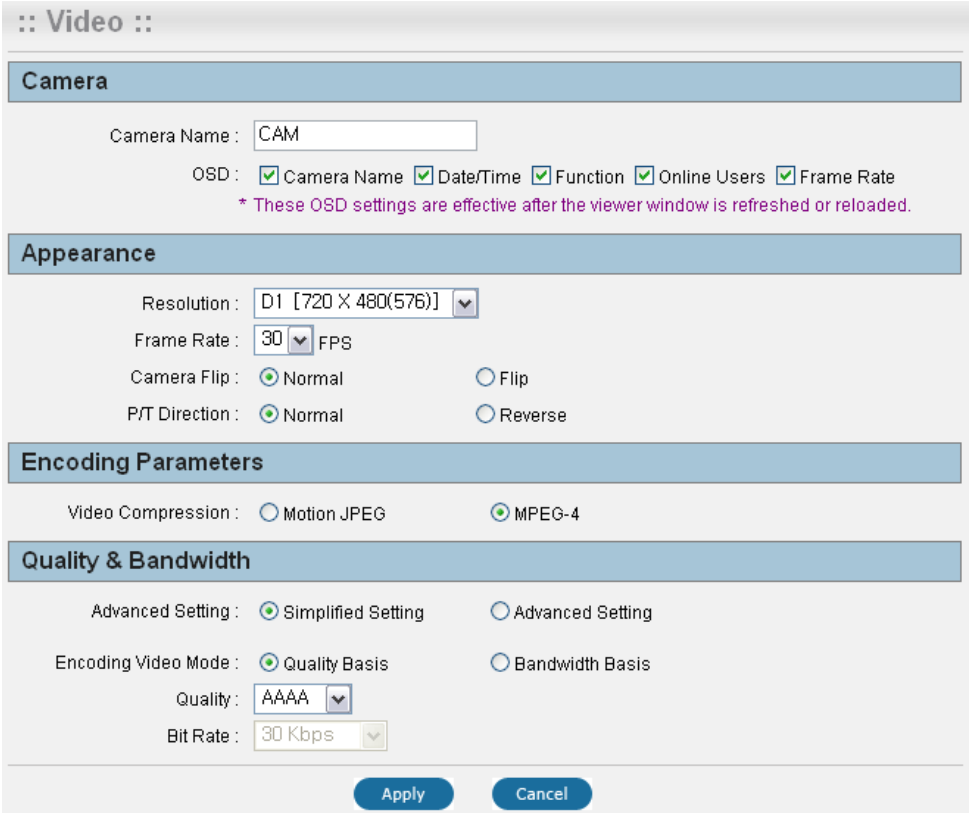


This section is provided to familiarize the user with the administration tools. Intuitive options are not explained in detail.

All the changes on Administration Tools take effect immediately. These settings will be global, affecting the view of all users currently logged on. However, OSD items selections are effective only after you refresh the viewer windows or restart the internet Explorer.

All settings are always saved in the video server even when you close the viewer program or you turn off the Power of the video server. If you lost your password, you must press the reset button to return all setting to its factory defaults.

Video Tool


:: Video ::
Camera
Camera Name : CAM
OSD : Camera Name Date/Time Function Online Users Frame Rate
* These OSD settings are effective after the viewer window is refreshed or reloaded.
Appearance
Resolution : D1 [720 X 480(576)]
Frame Rate : 30 FPS
Camera Flip : Normal Flip
P/T Direction : Normal Reverse
Encoding Parameters
Video Compression : Motion JPEG MPEG-4
Quality & Bandwidth
Advanced Setting : Simplified Setting Advanced Setting
Encoding Video Mode : Quality Basis Bandwidth Basis
Quality : AAAA
Bit Rate : 30 Kbps
Apply
Cancel

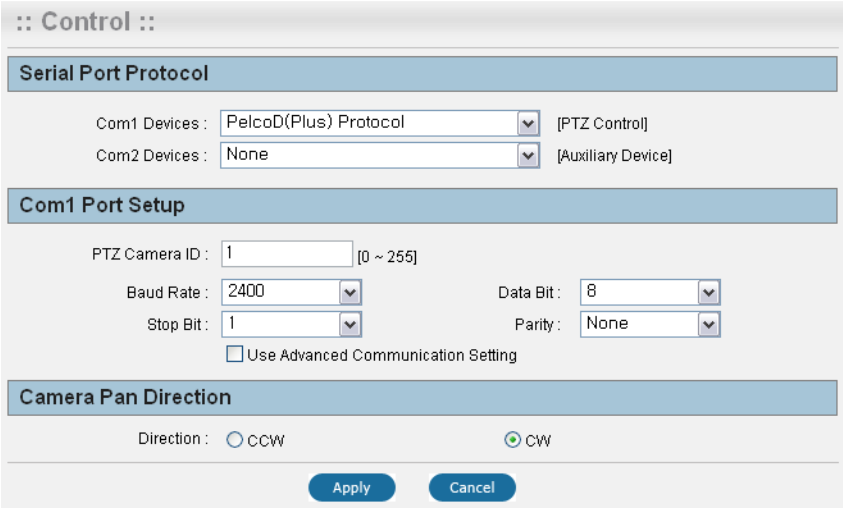
❑ Camera Name — For easy identify the cameras, you can freely assign a name to the device or camera connected to the IP Speed Dome. This will change the camera name on OSD. (Maximum 7 characters available)

❑ OSD — Select OSD items displayed on the screen. This will effect only after refresh site or restart your internet explorer.

❑ Resolution — Select the resolution (or video size) of the viewer screen.

❑ Frame Rate	Maximum frame rate of video to limit the traffic occupied.
❑ Camera Flip	Flip the video orientation. (i.e. Turn the video upside down.)
❑ P/T Direction	Define the direction of Pan/Tilt motion.
❑ Video Compression	Choose the video compression method form Motion JPEG and MPEG-4 formats.
❑ Simplified Setting and Advanced Setting	In fact, these two has same concepts. However, the **Simplified Setting** is described in terms of simple and easy expressions to help nonprofessional users. If you are professional and want to set delicately, choose **Advanced Setting**.
❑ Encoding Video Mode	In **Quality Basis mode**, you can select video encoding and streaming in the viewpoint of video quality rather than bandwidth occupied. In this case, Bandwidth can be traded off to meet your video quality requirement under some network environments. (This mode is same as VBR mode in Advanced setting) In **Bandwidth Basis mode**, you can select video encoding and streaming in the viewpoint of Bandwidth rather than video quality displayed. In this case, quality can be traded off to meet your bandwidth requirement under some network environments. (This mode is same as CBR mode in Advanced setting)
❑ Quality	This setting is available only Quality Basis mode. The quality level can be selected from 5 grades "A", "AA", "AAA", "AAAA", "AAAAA". It is noted that if you select Advanced Setting mode, you can define more grades (1 ~ 31).
❑ Bit Rate	This setting is available only Bandwidth Basis mode. The bandwidth can be select one of 10 values between 30Kbps to 5100Kbps. It is noted that you can select from more than 170 steps in Advanced Setting.

Control Tool



❑ Com1 — For PTZ devices only. Select the PTZ control protocol.

❑ Com2 — For Digital I/O module only. Select the module type.

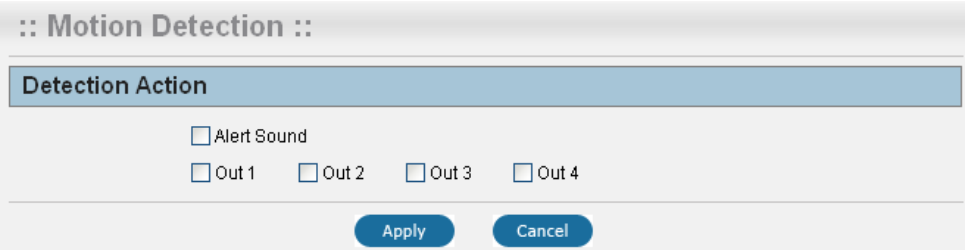
❑ PTZ Camera ID — For PTZ Device Address Setup. 0 ~ 255 are available.

❑ Baudrate, Data Bit Stop Bit, Parity Bit — This setup is only for the non-standard protocols. Sometimes, PTZ protocol of some manufacturers requires communication settings different from those of the standard. To meet these special settings, click the check box of "**Use Advanced Communication Setting"** bellow.

❑ Use Advanced Communication Setting — Used to adjust Baud Rate, Data Bit, Stop Bit, Parity Bit of the selected protocol. Do not use if the select protocol is standard.

❑ Camera Pan Direction — When the direction of camera pan is increasing clockwise, choose "CW. Other wise, choose "CCW".

Motion Detection Tool

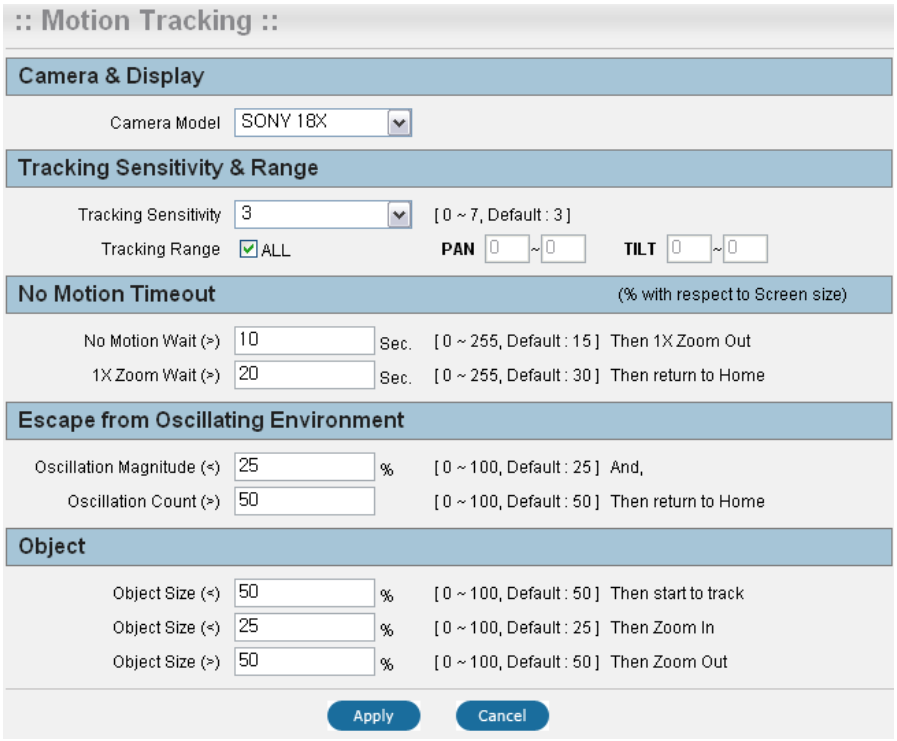


❑ Detection Action Set up the reaction of IP Speed Dome when motion detected.

Alert Sound : Audio Out through the Audio out jack of IP Speed Dome.

Out 1 ~ 4 : Select output relay numbers in the Sensor Alarm I/O module connected with IP Speed Dome.

Motion Tracking Tool



❑ Camera — Select model of Zoom Camera Module.

❑ Tracking Sensitivity — Select the sensitivity 0~7 for target's movement during Motion Tracking. The bigger number, the more sensitive.

❑ Tracking Range — Define the coverage of "Motion Tracking operation". If you want to apply motion tracking for all area, check the box before ALL. Otherwise, uncheck the box and specify the range of both Pan and tilt angles in degree. If the center of camera is out of effective range, the camera will return to its home position. This Range setting is very useful to exclude unwanted objects which is located some known area. For example, if your operating area has continuous moving objects such as liver, side walk or Free way which is not important for your application, you can assign effective area of motion tracking by setting both ranges of pan and tilt angle to exclude those area.

❑ No Motion Wait — The time out of waiting during motion tacking state. If the moving object is occluded or out of view, camera will wait for a while. Otherwise, camera will be trapped forever. So, this value means timeout of waiting time. After this amount of wait time, camera will automatically zoom out to 1x to search the object lost.

❑ 1x Zoom Wait

The time out of waiting after 1x zoom state. If camera loses a target object, it will automatically zoom out to 1x to search the object lost. If there is no moving object for a while, the camera will return to Home Position where "Motion Tracking" starts.

❑ Escape from Oscillating Environment

If there are oscillating object which is swaying left / right or up/down with limited amplitude (like swaying tree), camera will be trapped to this object forever since camera can not tell whether it is real moving object or not. To escape from this kind of trap, we can assign escape conditions using two parameters i.e. Oscillation magnitude and count. If this condition is reached, the camera will return to Home to find out new moving object.

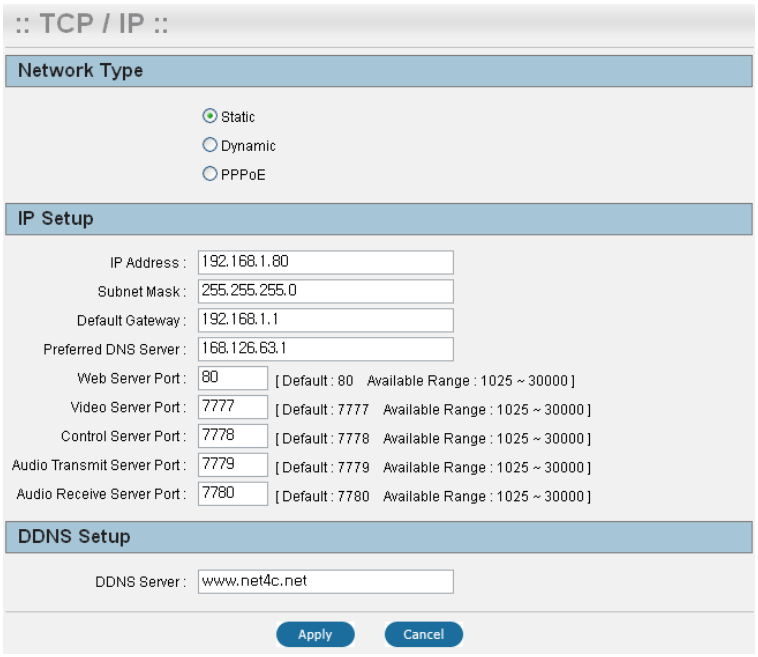
Oscillation magnitude means percentage size of oscillation magnitude with respect to camera view size (this size is depending on zoom ratio). **Oscillation count** represents number of oscillation. To help understanding, let's assume oscillation magnitude is 10% and count is 50. If there is a leave swaying by wind continuously and its amplitude of oscillation is roughly under 10% with respect to view size of the camera, IP Speed Dome will count the number of oscillation till it reaches 50. Then, IP Speed Dome will ignore this object motion and make camera return to Home.

❑ Object Size

There are 3 kinds of object size to be defined. To set up this easily, you must understand three characteristic of Motion tracking feature.

1. If size of moving object is too big, IP Speed Dome will ignore this object since it is likely to be noise, rain or Camera motion itself. In other words, IP Speed Dome will track the object smaller than size in the first box.
2. If size of moving object is small, IP Speed Dome will send a command to increase the size by zooming in a little bit to see detail. In other words, IP Speed Dome will make camera zoom in if the object is smaller than size in the second box.
3. If size of moving object is big, IP Speed Dome will send a command to reduce the size by zooming out a little bit not to lose the target. In other words, IP Speed Dome will make camera zoom out if the object is bigger than size in the third box.

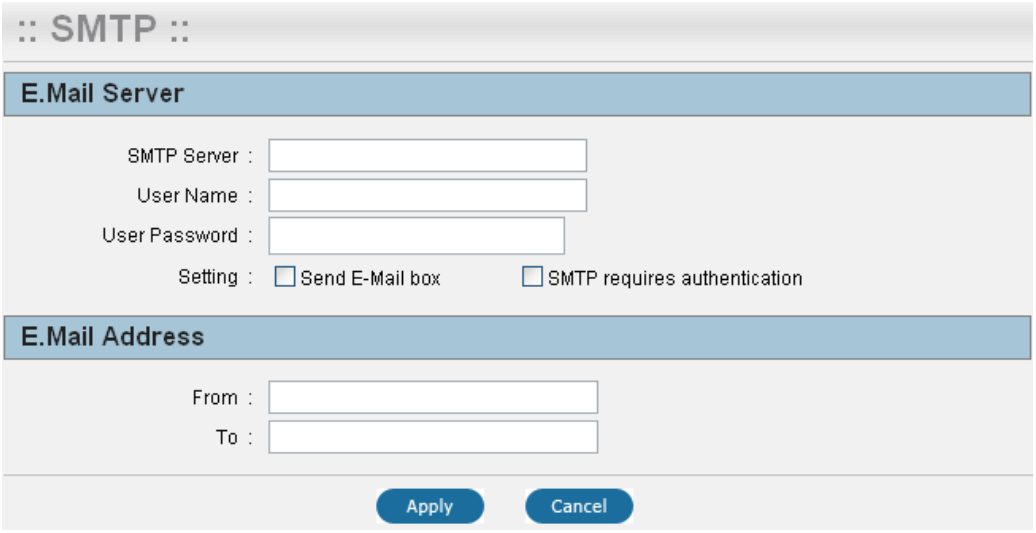
TCP/IP Tool


:: TCP / IP ::
Network Type
Static
Dynamic
PPPoE
IP Setup
IP Address : 192.168.1.80
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.1.1
Preferred DNS Server : 168.126.63.1
Web Server Port : 80 [Default : 80 Available Range : 1025 ~ 30000]
Video Server Port : 7777 [Default : 7777 Available Range : 1025 ~ 30000]
Control Server Port : 7778 [Default : 7778 Available Range : 1025 ~ 30000]
Audio Transmit Server Port : 7779 [Default : 7779 Available Range : 1025 ~ 30000]
Audio Receive Server Port : 7780 [Default : 7780 Available Range : 1025 ~ 30000]
DDNS Setup
DDNS Server : www.net4c.net
Apply
Cancel

❑ Network Type	Select a Static or Dynamic address scheme that is used by the Internet Service Provider (not the addressing scheme used by a personal router).
❑ Internet Address	Input a value to assign an IP address to the IP Speed Dome.
❑ Subnet Mask	Input a value to assign a subnet mask to the IP Speed Dome.
❑ Default Gateway	Input the IP address of the default gateway.
❑ Primary DNS Server	Input the IP address of an ISP's DNS server.
❑ Web Server Port	Assign a TCP port number to assign a Web Interface port number to the IP Speed Dome. This port is used for transmitting ActiveX program to web browser based viewer.
❑ Video Server Port	Assign a TCP port number to assign a Video Server port number to the IP Speed Dome.
❑ Control Server Port	Assign a port number for control server. This port is used for camera control.
❑ Audio Transmit Server Port	Assign Audio data send server port number.
❑ Audio Receive Server Port	Assign Audio data receive server port number.
❑ DDNS Server	Assign DDNS server address.

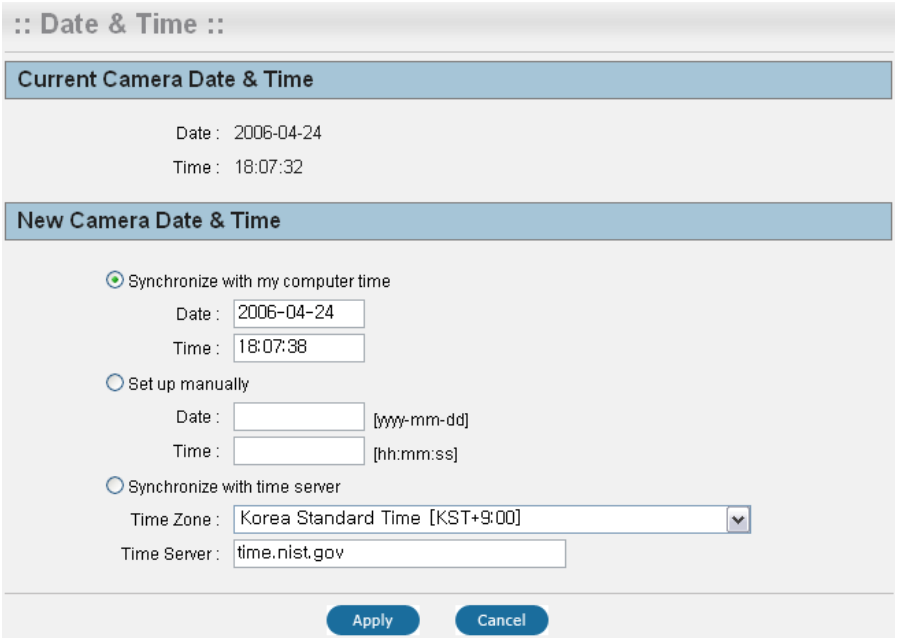
SMTP Tool

This function is used to email the specified email recipient and notify that individual of the IP address / web port number used to access the IP Speed Dome. This email function is only activates on power-on reset time of IP Speed Dome.



- ❑ SMTP Server — Enter an SMTP server to send email.
- ❑ User Name — Input user name used for SMTP authentification to access the mail server.
- ❑ User Password — Input the password used for SMTP authentification to access the mail server.
- ❑ Send E-Mail box — If this check box is set to on, email function is enabled.
- ❑ SMTP requires auth. — Check this box if the mail server requires SMTP authentification.
- ❑ From — Input the email address of sender. The email address should be admitted to the SMPT sever.
- ❑ To — Input the email address of receiver.

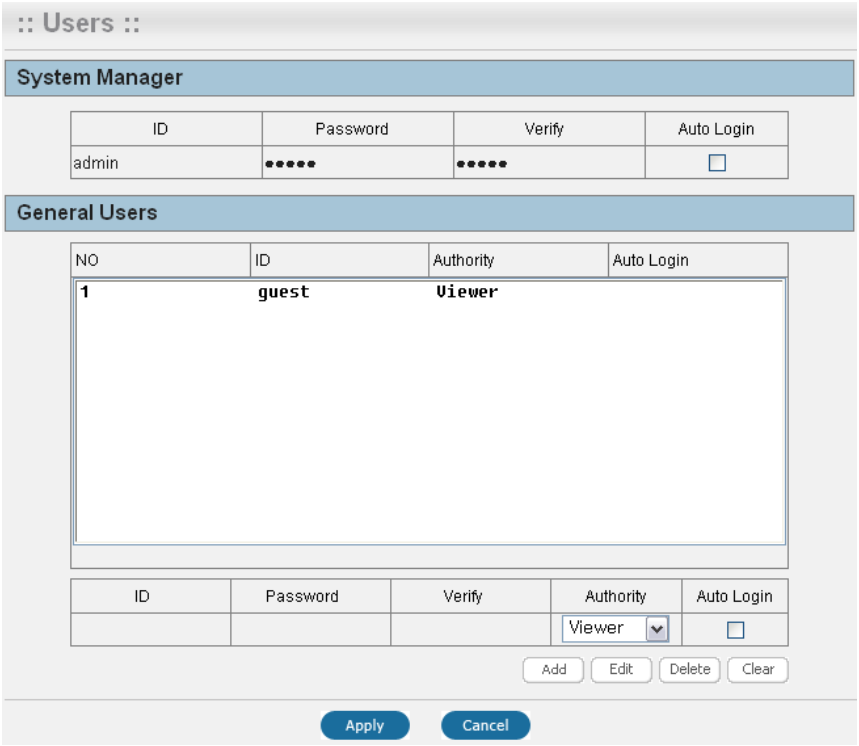
Date & Time Tool



❑ Current Date/Time — It shows the current Date/Time setting of IP Speed Dome.

❑ New Date/Time — Select the method of Date/Time setting. Date/Time can be set by local computer or time server or manual.

Users Tool



❑ System Manager — Specify an ID and Password for the System Administrator of the IP Speed Dome. The System Administrator will have all rights and privileges to manage the system.

ⓘ After changing Administrator's ID and Password, IP Speed Dome should be booted to apply new ID and Password.

❑ General Manager — Give access privileges up to 40 separate user accounts.

ⓘ Only 40 users may be logged on simultaneously, regardless of what user identities are logged on.

❑ To add a user — Input an ID and Password, verify Password, select Authority, click ADD.

❑ To edit a user — Select the user from the list of users, make necessary changes, click EDIT.

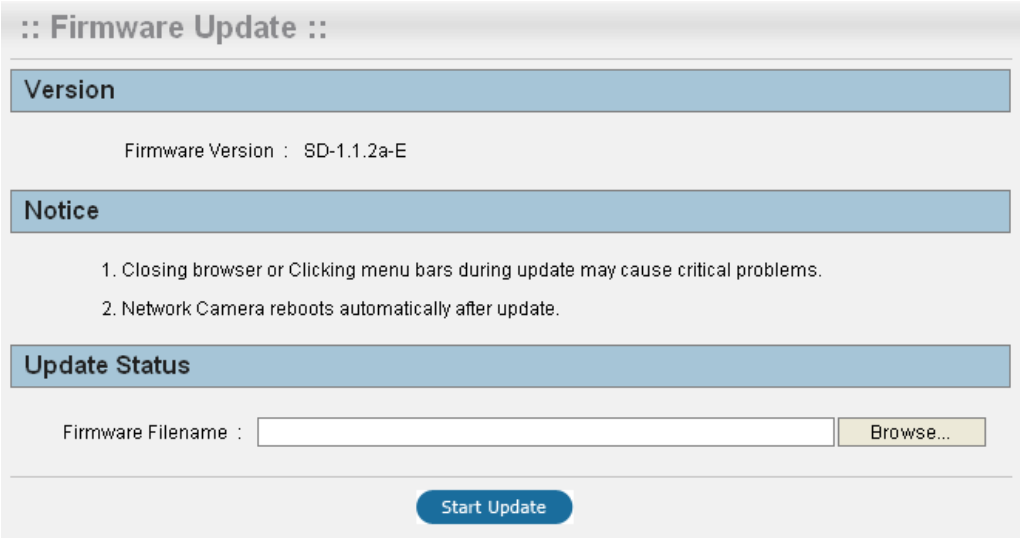
❑ To delete a user — Select the user from the list of users, click DELETE.

❑ Operator Authority — This privilege gives the user rights to operate the PTZ controls.

❑ Viewer Authority — This privilege gives the user rights to operate only the icons associated with digital 2× zoom, stretch, OSD, and video capture. These options only affect that current user. The changes made there will have no effect on the other users logged on.

❑ Auto Login — Only one user/administrator may have Auto Login enabled. When the video server is accessed, it will bypass the login screen and logon automatically.

Firmware Update Tool



❑ Version — Shows the current firmware version.

❑ How to upgrade — Click [Browse…] button and select the latest version of the firmware. Its file name should be ***.bin.

Click [Update Start] button. It will start upgrading its firmware. IP Speed Dome will re-boot automatically as soon as it finish the upgrade process.

ⓘ **After upgrade, its system configuration should be set to factory default.**

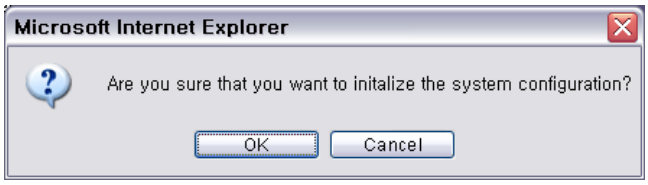
ⓘ **Connect IP Speed Dome to a computer directly with a crossover Ethernet cable.**
Do not use internet to upgrade. There may be unexpected disconnection on internet during upgrade and it may cause fatal system damage.

ⓘ **Do not close browser or click menu during update. It may cause fatal system damage.**

Default Set Tool

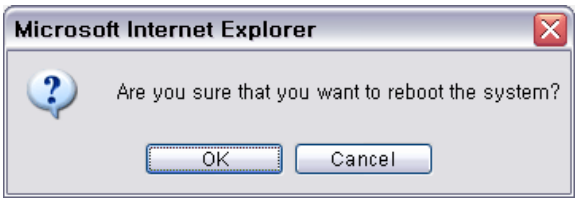
Reset its system configuration to the factory defaults.

Note) After initializing, all information should be deleted. Please re-consider before initializing.



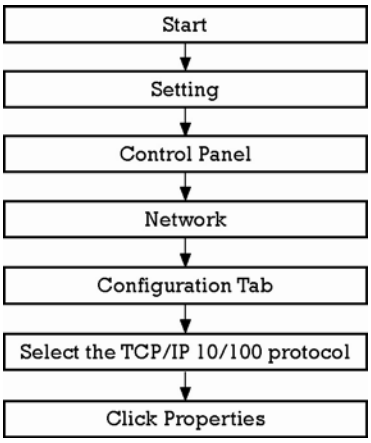
Rebooting Tool

Re-boots IP Speed Dome.



A : Current TCP/IP Settings

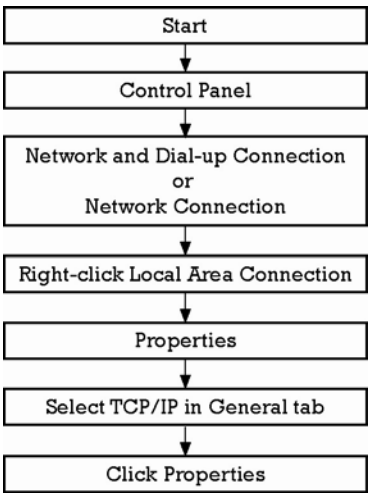
❑ For Windows 98 / ME Users



- Note the settings under the IP Address, DNS Configuration, and Gateway tabs

ⓘ If your IP settings are obtained automatically, you could use the MS-DOS prompt (or Command Prompt) to determine your IP address. For information on how to do this, please read the FAQ.

❑ For Windows 2000 or Windows XP

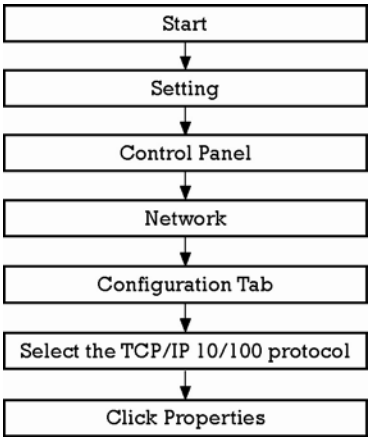


- Under the "General" tab of the TCP/IP Properties you will see your IP address information.

ⓘ If your IP settings are obtained automatically, you could use the MS-DOS prompt (or Command Prompt) to determine your IP address. For information on how to do this, please read the FAQ.

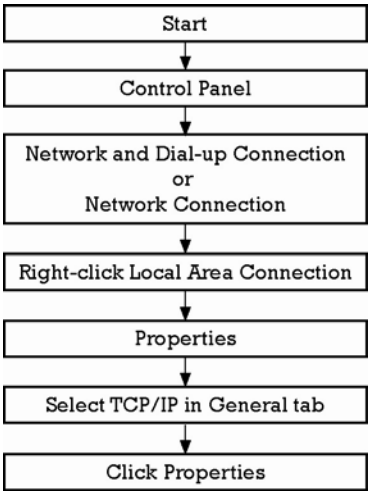
B : Changing your computer's IP address and subnet mask

❑ For Windows 98 / ME Users



- Select 'Use the following IP address' and change the IP address and Subnet Mask.

❑ For Windows 2000 or Windows XP



- Select 'Use the following IP address'

C : Port Forwarding

After assigning the IP Speed Dome a web server port and video server port you must use Port Forwarding (for cases A, B)

Please consult your router's user guide on how to correctly configure Port Forwarding.

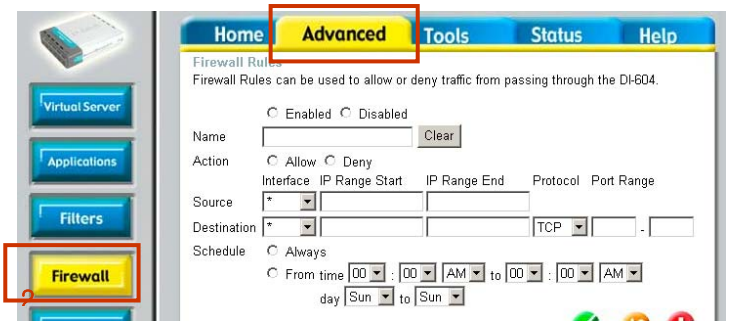
For your convenience, we have provided two example configurations.

❑ For D-Link DI-604 broadband routers:

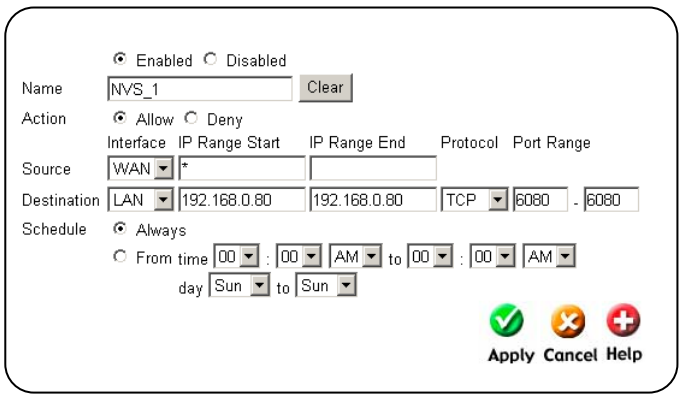
① Open a web browser and type http://192.168.0.1 into your Address bar. (the default IP address to access the router)

② You will have to supply your User Name and Password to log onto the router. Default from factory. (User Name: admin Password: [leave blank])

③ Select the advance tab and click "Firewall" menu.



④ Click "Apply" button after inputting proper values. The example is as below

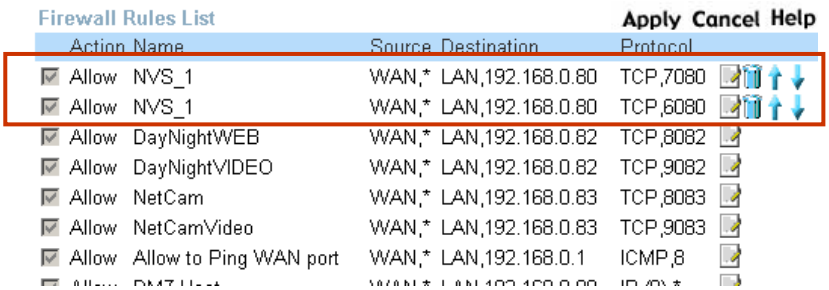


• Enabled / Disabled	Select "Enabled".
• Name	Input IP Speed Dome name.
• Action	Select "Allow".
• Source	Select "WAN" in Interface option. Input * in the both of IP Range Start / End.
• Destination	Select "LAN" in Interface option. Input IP Speed Dome IP Address in IP Range Start / End. Select "TCP" in Protocol option. Input IP Speed Dome Web Server Port in the both of Port Range. The port number of the former blank should be same as that of the latter blank in Port Range.
• Schedule	Select "Always"

⑤ If 'Setting Saved' shows, click [Continue] button.

⑥ With the same method as above, add Video Server Port.

⑦ The Web Server Port and Video Server Port shows in "Firewall Rules List" as below.

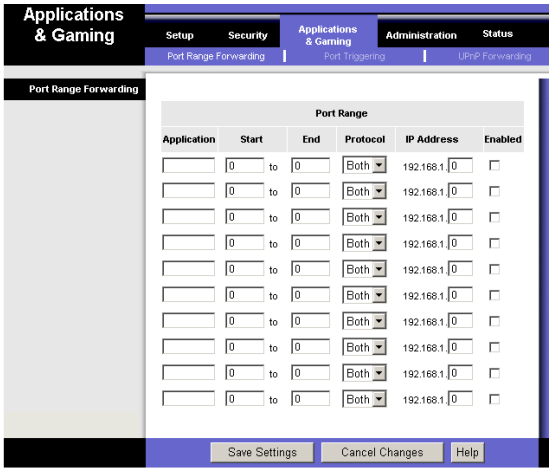

Firewall Rules List
Apply Cancel Help
Action Name Source Destination Protocol
Allow NVS_1 WAN,* LAN,192.168.0.80 TCP,7080
Allow NVS_1 WAN,* LAN,192.168.0.80 TCP,6080
Allow DayNightWEB WAN,* LAN,192.168.0.82 TCP,8082
Allow DayNightVIDEO WAN,* LAN,192.168.0.82 TCP,9082
Allow NetCam WAN,* LAN,192.168.0.83 TCP,8083
Allow NetCamVideo WAN,* LAN,192.168.0.83 TCP,9083
Allow Allow to Ping WAN port WAN,* LAN,192.168.0.1 ICMP,8

❑ **For Linksys BEFSR41 Cable/DSL routers:**

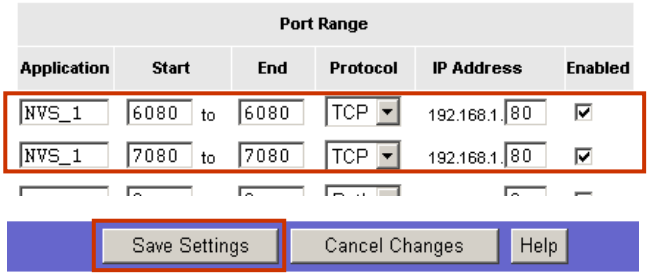
① Open a web browser and type http://192.168.1.1 into your Address bar (the default IP address to access the router)

② You will have to supply your User Name and Password to log onto the router. Default from factory (User Name:[leave blank] Password: admin)

③ Select Applications & Gaming from the menu bar.



④ Input port numbers in "Port Range" as below and click [Save Setting] button. Both of Web Server Port and Video Server Port should be added. The example is as below.



- Application — Input IP Speed Dome name.
- Start / End — Input IP Speed Dome Web Server Port and Video Server Port. Start should be same as End. Both of Web Server Port and Video Server Port should be added.
- Protocol — Select "TCP" in Protocol option.
- IP Address — Input IP Speed Dome IP Address.
- Enabled — Check the square.

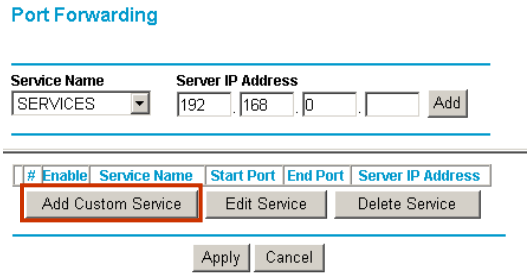
❑ For Netgear RP614 routers

① Input http://192.168.0.1 in address bar of web browser. http://192.168.0.1 is the default IP address.

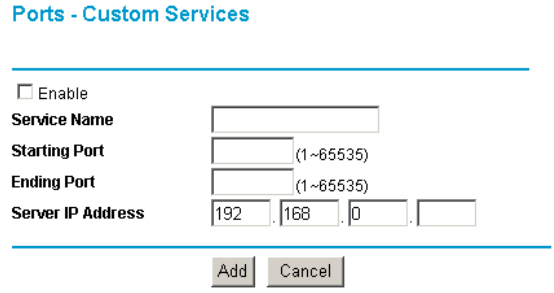
② If it asks ID and password, input admin as ID and password as password.

③ Click "Port Forwarding" in "Advanced".

④ Click "Add Custom Service" button in Port Forwarding page.



⑤ Input proper values in "Ports - Custom Services" page as below.



- Enable — Check it.
- Service Name — Input IP Speed Dome name.
- Starting/Ending Port — Input IP Speed Dome Web Server port. Starting Port should be same as Ending Port.
- Server IP Address — Input IP Speed Dome IP Address.

⑥ Click "Add" button.

⑦ With the same method as above, add Video Server Port.

⑧ Click "Apply" button to finish Port Forwarding.

❑ I can't connect!!

In the case of a connection failure.

Modem Reboot > Modem Reboot Finished > Router Reboot > Router Reboot Finished > IP Speed Dome Reboot > IP Speed Dome Reboot Finish > Verify DDNS and IP Speed Dome connection, if applicable.

❑ How do I choose a unique IP address that matches my network?

For your home or small office, ensure that all devices on your network are running. PING an IP address that you plan to assign to the IP Speed Dome. If you receive a "Request timed out", then you may use that IP address. To ensure the IP address that you will assign the IP Speed Dome matches your network, review your "Current TCP/IP Settings" that you had recorded earlier. See some examples below:

- If your "IP Address" entry in "Current TCP/IP Settings" was 192.168.0.y, and your "Subnet Mask" was 255.255.255.0 then use 192.168.0.x for your IP Speed Dome's IP Address ("x" meaning any number between 2-254 that you wish, as long as it passes the "PING" test).
- If your "IP Address" entry is not a 192.168.z.y address with a "Subnet Mask" of 255.255.255.0 then please contact our Support Center.
- If your "IP Address" entry is not a 192.168.z.y address, please contact our Support Center.

❑ How do I open an MS-DOS or Command Prompt?

- Windows 98 / ME Users : Start → Programs → Accessories → MS-DOS prompt
- Windows 2000 / XP Users : Start → (All) Programs → Accessories → Command Prompt

❑ How do I "PING" an IP address?

① Open an MS-DOS (or Command) prompt

② At the prompt type - "ping xxx.xxx.xxx.xxx" (without the quotes and replace the "x"s with an IP address)

③ Press Enter

❑ How do I enable or check ActiveX on my browser

Open Internet Explorer → Tools on the menu bar → Internet Options → Security Tab → Custom Level → Scroll down and verify that you are prompted or have enabled ActiveX controls and plug-ins to be downloaded and executed. → click OK → restart browser

❑ How do I find out my IP address information if my settings were automatically detected?

- Windows 98 / ME Users

  ① Open an MS-DOS Prompt

  ② At the prompt type: "winipcfg" (without the quotation marks)

  ③ Use the drop down list to select your 10/100 Ethernet Adapter (not a PPP adapter)

  ④ Now you will see your IP Address, Subnet Mask, and Default Gateway information

  ⑤ For DNS information contact your Internet Service Provider

- Windows 2000 / XP Users

  ① Open a Command Prompt

  ② At the prompt type - "ipconfig /all" (without the quotes)

  ③ Near the end of the information supplied, should be your current IP address, subnet mask, default gateway and DNS servers

❑ How do I choose a private IP address:

Assign your IP Speed Dome a private IP address that matches your current network. Below lists the ranges for private addresses:

- Private Class A address space : 192.168.0.0 - 192.168.255.255
- Private Class B address space : 172.16.0.0 - 172.31.255.255
- Private Class C address space : 10.0.0.0 - 10.255.255.255

❑ My POWER light is not on?

Power is not being supplied to the unit. Please use the power supply shipped with the unit and verify that a power source is active from the attached power outlet used to connect the adapter. You can test this by plugging in any other electrical device and verify its operation. After using the power supply shipped with the product, checking the power source, and reinserting the power connector into the IP Speed Dome, please call our Support Center. The power supply may be defective.

❑ My ACTIVE light is not flashing?

Verify the power supply to the unit. Power off the unit and back on again, wait 1 minute, if the ACTIVE light still does not begin to flash, you will have to set the unit to its factory default (THIS WILL DELETE ANY CONFIGURATION AND SET THE UNIT TO THE FACTORY DEFAULTS). Power on the unit and insert the end of a paper clip into the small recessed opening on the back of the unit. Use the clip to press the button located within that opening.

❑ My LINK light is not flashing or solid?

Verify the cable connection. 99% of the time the cable's connection to the unit is causing this problem. Try using a different network cable or crossover cable (for PC connection only). Try reinserting the cable, if this still doesn't solve the problem call our Support Center.

❑ I want to prevent users from viewing my camera.

① Go into Administration Tools of the IP Speed Dome.

② Click on Users

③ Delete the user or all users by deleting the ID and password associated with that user.

❑ Can I record the video?

Yes you can record, but you will need to purchase a separate software program to allow PC-based recording. This software is available by contacting your distributor or our Customer Service Center. The software named "I-PRO" will connect up to 16 separate 1-channel video servers for remote viewing, remote controlling, and remote recording without the loss of quality or size (up to 640×480 resolution).

❑ I can access the video server on my LAN, but not from the Internet.

Verify that your router (if applicable) has port forwarding properly configured. If accessing from our DDNS service, verify correct serial number. Firewall issues may prevent user access.

❑ How do I reset the unit to factory defaults?

On the underside of the unit you will find a recessed opening located near the top-left side of the label. Power ON the unit and use a paper clip to push the reset button within that opening. You should then see the ACTIVE light turn off and after a few seconds the ACTIVE light will begin to flash, signifying a successful reboot. If the ACTIVE light does not turn off after depressing the reset button, please try holding the button in for a few seconds and releasing. YOU WILL LOSE ALL DATA THAT HAD BEEN ENTERED PREVIOUSLY AND THE IP SPEED DOME WILL BE SET TO ITS FACTORY RESETS.

- **Can I use the IP Speed Dome on my dial-up Internet connection?**

  No, we recommend a high-speed broadband connection of at least 128Kb/sec.

- **I'm accessing my video server remotely over the Internet and the video stream is choppy, is this normal?**

  Yes. The frames per second received remotely are determined by your bandwidth capabilities both at your site where the IP Speed Dome is installed and your remote location. The lower of the two sites will determine how fast your video stream is received. It is recommended to have at least a 256Kb/sec upstream connection from the site where the IP Speed Dome is installed. Lower speeds will operate properly, but provide poor remote performance. The Faster the Internet connection at both ends, the faster the video stream.

- **Can I view multiple cameras at once?**

  Currently the IP Speed Dome supports 1 channel of video input. Typically, one camera per IP Speed Dome.

  You can view multiple cameras only if the IP Speed Dome is connected to another device supporting multiple cameras (DVR, multiplexer, etc.) or if you purchase the I-PRO II software which will connect up to 16 separate IP Speed Dome, each connected to their own camera or device.

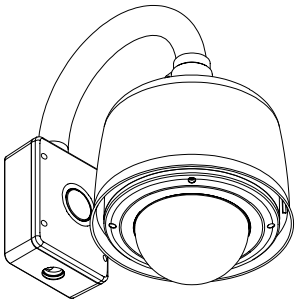
Specifications – PTI-M300

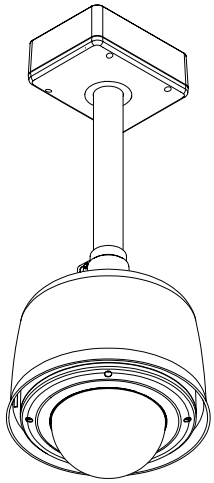
Model		PTI-M300
Camera	CCD	1/4" EX-view HAD™ CCD
	Effective Pixels	Approx. 440,000 pixels
	Horizontal Res.	530 TV Line
	S/N Ratio	50 dB
	Zoom	×36 Optical Zoom, ×12 Digital Zoom(x432)
	Focal length	f=3.4mm(wide) ~ 122.4mm(tele), F1.6~F4.5
	Min. illumination	1/60s mode : 1.4lx(typical)(F1.6, 50IRE) 1/4s mode : 0.1lx(typical)(F1.6, 50IRE)
	Day & Night	Auto / Day / Night(ICR)
	Focus	Auto / Manual / SemiAuto
	Iris	Auto / Manual
	Shutter Speed	1/1~1/10,000s , 22 steps
	AGC	Auto/Manual(-3~28dB, 2dB steps)
	White Balance	Auto / Manual(Red, Blue Gain Adjustable)
	BLC	WDR, BLC ON/OFF
	Flickerless	Selectable
	Privacy Zone	8 Area
Pan/Tilt	Range	Pan : 360°(Endless)
		Tilt : 180° (Auto-Flip), 90° (Normal)
	Pan/Tilt Speed	Preset : 360°/sec
		Manual : 0.05 ~ 360°/sec (proportional to zoom)
		Auto Pan : 1~ 180°/sec
	Preset	127 Preset (Label, Camera Image Setting)
	Pattern	4 Pattern, 1000 commands(about 5 minute)/Pattern
	Auto Pan	8 Auto Pan
	Scan	8 Scan (20 action entities per Scan)
	Other Functions	Auto Flip, Auto Parking, Power Up Action etc.
Network	CPU	32Bit RISC Processor
	OS	Embedded Linux
	Flash Memory	8MB
	Network	10/100 Base-T Ethernet
	Compression	Selectable MJPEG and MPEG-4 ASP Level 5
	Frame Rate	30 @ 720x480, 25 @ 720x576
	Audio	Bidirectional / ADPCM
	Video Streaming	CBR, VBR, Adjustable Bit Rate
	Number of Users	Max. 40 Simultaneously
General	Communication	RS-485
	Protocol	Auto, Pelco-D, Pelco-P, Samsung selectable
	Privacy Zone	8 Zone
	Alarm Input	8 Input
	Alarm Output	4 Relay Output
	OSD	Menu / PTZ information etc
	Rated Power**	AC Type : AC 24V Volt
	Dimension	Dome : ∅146
		Housing : ∅260 × 190(H) mm
	Weight	about 5 Kg
	Operating Temp.	-40°C ~ 50°C

* Specifications of this product can be subjected to change without notice.

** Check the voltage and current capacity of rated power carefully.

■ Appearance





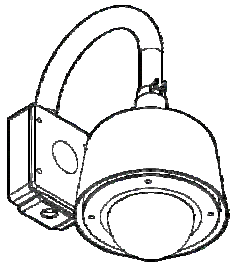
Specifications – PTI-M301

Model		PTI-M301	
Camera	Signal Format	NTSC	PAL
	Image Sensor	1/4" Interline Transfer CCD	
	Total Pixels	410K Pixels [811(H) x 508(V)]	470K Pixels [795(H) x 596(V)]
	Effective Pixels	380K Pixels [768(H) x 494(V)]	440K Pixels [752(H) x 582(V)]
	Horizontal Res.	Color: 520 TV Line / BW:570 TV Line	
	S/N Ratio	50 dB	
	Zoom	×30 Optical Zoom, ×10 Digital Zoom (Max. ×300)	
	Focal length	F1.6(W) 3.4(T) f=3.3~ 99.0mm	
	Min. illumination	Color: 0.6Lux/F1.6 (50IRE) B/W: 0.1Lux /F1.6 (ICR On)	
	Day & Night	Auto / Day / Night(ICR)	
	Focus	Auto / Manual / SemiAuto	
	Iris	Auto / Manual	
	Shutter Speed	256×~2×, 1/60~1/120000s (27Step)	256×~2×, 1/50~1/120000 s (27 Step)
	AGC	Low/ Middle/ High/ Manual/ Off	
	White Balance	ATW[INDOOR(3,000K~6,500K), OUTDOOR(1,800K ~10,500K)]/ AWC/ MANUAL	
	BLC	ON/OFF	
	Flickerless	Selectable	
	DNR	LOW/ MIDDLE/ HIGH/ OFF	
Pan/Tilt	Range	Pan : 0~360°(Endless)	
		Tilt : 0° ~180° (Auto-Flip On) , 0° ~ 95° (Auto-Flip Off)	
	Pan/Tilt Speed	Preset : 360°/sec	
		Manual : 0.05 ~ 360°/sec (proportional to zoom)	
		Scan : 1~ 180°/sec	
	Preset	127 Preset (Label, Camera Image Setting)	
	Pattern	4 Patterns, 1,000 commands/Pattern (about 5 minutes in Normal operation)	
	Scan	8 Scan	
	Group	8 Group (20 action entities per Group)	
	Schedule	7 Rules (Condition: Day, Time → Action: Preset, Scan, Group, Pattern)	
	Other Functions	Freeze In Preset, Auto Flip, Auto Parking, Power Up Action etc.	
General	Communication	RS-485	
	Protocol	Auto, Pelco-D, Pelco-P, Samsung selectable	
	Privacy Zone	8 Zone	
	Alarm Input	8 Input	
	Alarm Output	4 Relay Output	
	OSD	Menu / PTZ information etc Support 7 Languages: [ENGLISH/ ESPAÑOL/ FRANÇAIS/ DEUTSCH/ ITALIANO/ РУССКИЙ/ PORTUGUÊS]	
	Rated Power**	AC 24V	24W(Header OFF)/ 57W(Heater ON)
	Dimension	Net (W×H ×D)	260 × 552 × 405 mm, 10.2 × 21.7 ×16 inch
		Package (W×H×D)	605×400×500 mm, 23.8 ×15.7 ×19.7 inch
	Weight	Net	about 6 kg, 13.2 Lb
		Package	about 11 kg, 24.2 Lb
	Operating Temp.	-45°C ~ 50°C (-49°F ~ 122°F)	

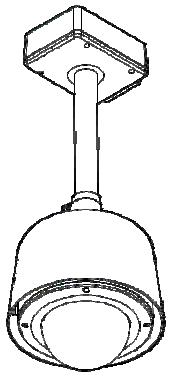
* Specifications of this product can be subjected to change without notice.
** Check the rated voltage and current capacity of power supply carefully.

■ Appearance

● Wall Mount



● Ceiling Mount



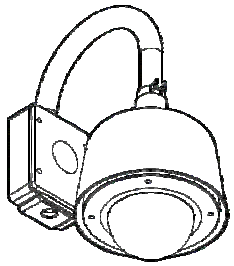
Specifications – PTI-M302

Model		PTI-M302	
Camera	Signal Format	NTSC	PAL
	Image Sensor	1/4" Double Density Interline Transfer CCD	
	Total Pixels	410K Pixels [811(H) x 508(V)]	470K Pixels [795(H) x 596(V)]
	Effective Pixels	380K Pixels [768(H) x 494(V)]	440K Pixels [752(H) x 582(V)]
	Horizontal Res.	Color: 550 TV Line / BW:620 TV Line	
	S/N Ratio	50 dB	
	Zoom	×37 Optical Zoom, ×12 Digital Zoom (Max. ×444)	
	Focal length	F1.6(W) 3.5(T) f=3.5~129.5mm	
	Min. illumination	Color: 1.0Lux/F1.6 (50IRE) B/W: 0.1Lux /F1.6 (50IRE)	
	Day & Night	Auto / Day / Night(ICR)	
	Focus	Auto / Manual / SemiAuto	
	Iris	Auto / Manual	
	Shutter Speed	256×~2×, 1/60~ 1/120000 sec (27 Step)	256×~2×, 1/50~ 1/120000 sec (27 Step)
	AGC	Low/ Middle/ High/ Manual/ Off	
	White Balance	ATW/ AWC/ MANUAL/ INDOOR/ OUTDOOR (1,800K ~10,500K)	
	WDR, HLC	OFF/ WDR/ HLC	
	Flickerless	Selectable	
	DNR	LOW/ MIDDLE/ HIGH/ OFF	
Pan/Tilt	Range	Pan : 0~360°(Endless)	
		Tilt : 0° ~180° (Auto-Flip On) , 0° ~ 95° (Auto-Flip Off)	
	Pan/Tilt Speed	Preset : 360°/sec	
		Manual : 0.05 ~ 360°/sec (proportional to zoom)	
		Scan : 1~ 180°/sec	
	Preset	127 Preset (Label, Camera Image Setting)	
	Pattern	4 Patterns, 1,000 commands/Pattern (about 5 minutes in Normal operation)	
	Scan	8 Scan	
	Group	8 Group (20 action entities per Group)	
	Schedule	7 Rules (Condition: Day, Time → Action: Preset, Scan, Group, Pattern)	
	Other Functions	Freeze In Preset, Auto Flip, Auto Parking, Power Up Action etc..	
General	Communication	RS-485	
	Protocol	Auto, Pelco-D, Pelco-P, Samsung selectable	
	Privacy Zone	8 Zone	
	Alarm Input	8 Input	
	Alarm Output	4 Relay Output	
	OSD	Menu / PTZ information etc Support 7 Languages: [ENGLISH/ ESPAÑOL/ FRANÇAIS/ DEUTSCH/ ITALIANO/ РУССКИЙ/ PORTUGUÊS]	
	Rated Power**	AC 24V	24W(Header OFF)/ 57W(Heater ON)
	Dimension	Net (W×H ×D)	260 × 552 × 405 mm, 10.2 × 21.7 ×16 inch
		Package (W×H×D)	605×400×500 mm, 23.8 ×15.7 ×19.7 inch
	Weight	Net	about 6 kg, 13.2 Lb
		Package	about 11 kg, 24.2 Lb
	Operating Temp.	-45°C ~ 50°C (-49°F ~ 122°F)	

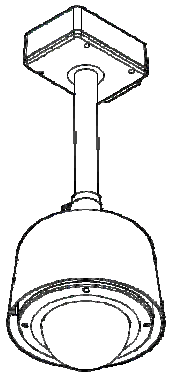
* Specifications of this product can be subjected to change without notice.
** Check the rated voltage and current capacity of power supply carefully.

■ Appearance

● Wall Mount



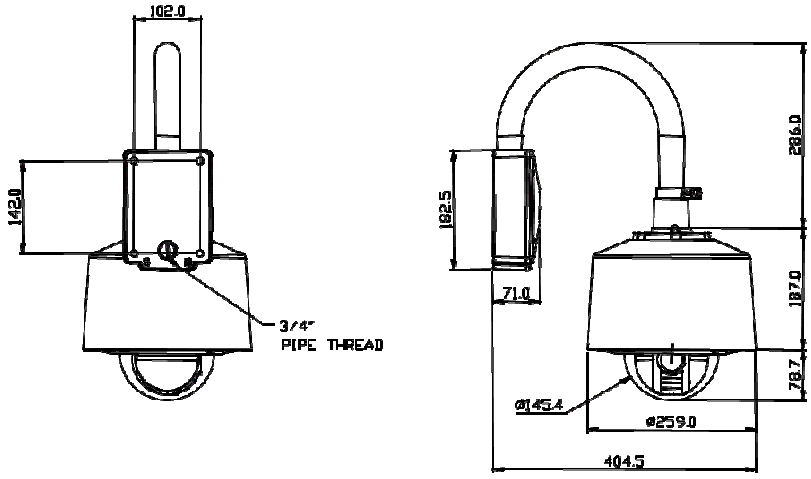
● Ceiling Mount



Dimension

Unit (mm)

● Wall Mount Bracket



● Ceiling Mount Bracket